Vol. XXXIX January, 1950 No. 1

*SCIENTIFIC EDITION*

# JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

*Justin L. Powers, Editor*

*Committee on Publications*

George D. Beal, *Chairman*
B. V. Christensen
Robert P. Fischelis
Don E. Francke
Hugo H. Schaefer

*Editorial Advisory Board*

L. W. Busse
John E. Christian
T. C. Daniels
L. W. Hazleton
E. J. Hughes
H. W. Youngken, Jr.

This issue in two Parts

PART I—JANUARY JOURNAL, SCIENTIFIC EDITION

## *CONTENTS OF THIS ISSUE*

A Routine Method for the *in Vitro* Assay of Tyrothricin ..... 1
*R. J. Reedy* and *S. W. Wolfson*

The Preparation of Certain Fluoro-Iodo Radiopaque Compounds ..... 4
*Stanley G. Mittelstaedt* and *Glenn L. Jenkins*

Synthetic Analogs of the Adrenal Cortical Hormones. II. Synthesis of 4,4'-Bis(acetoxyacetyl)-$\alpha,\alpha'$-diethylstilbene ..... 7
*George P. Hager* and *Raymond M. Burgison*

The Determination of Phenolphthalein in Mineral Oil Emulsion ..... 10
*Alexander T. Warren, John E. Logan,* and *Raymond L. Thatcher*

A Study of 2-Methylaminoheptane, "Oenethyl" ..... 12
*F. E. Shaffer* and *P. K. Knoefel*

Pharmaceutical Application of Ferrous Gluconate N. F. ..... 16
*George B. Stone*

Effect of Buffering Agents on Absorption of Acetylsalicylic Acid ..... 21
*W. D. Paul, R. L. Dryer,* and *J. I. Routh*

A Study of the Modified Bell and Krantz Method as Applied to the Assay of the Three U. S. P. Digitalis Glycosides ..... 25
*E. E. Kennedy*

A Rapid Titrimetric Assay of Phenobarbital Elixir ..... 28
*Albert M. Mattocks* and *Elmer C. Voshall*

Absorption Spectra of Some Sunscreens for Sunburn Preparations ..... 30
*Arthur C. Giese, Eleanor Christensen,* and *Janet Jeppson*

The Colorimetric Determination of Estrone, Equilin, and Equilenin in Mixtures ..... 37
*Daniel Banes*

Acute and Chronic Toxicity of Chymotrypsin in Rats ..... 42
*J. Leyden Webb, Paul R. Saunders, Cecil A. Saunders, Jr.,* and *Clinton H. Thienes*

Chemical and Pharmacologic Studies on Emetine and Quaternary Emetine Derivatives ..... 43
*Andrew Lasslo* and *Kazuo K. Kimura*

Studies on Alcohol-Soluble Fungistatic and Fungicidal Compounds. V. Evaluation of the Fungistatic and Fungicidal Properties of Antifungal Ointments *in Vitro* ..... 47
*Milton J. Golden* and *Kurt A. Oster*

Colorimetric Determination of Phenylephrine (Neo-Synephrine) in Pharmaceutical Products ..... 50
*M. E. Auerbach*

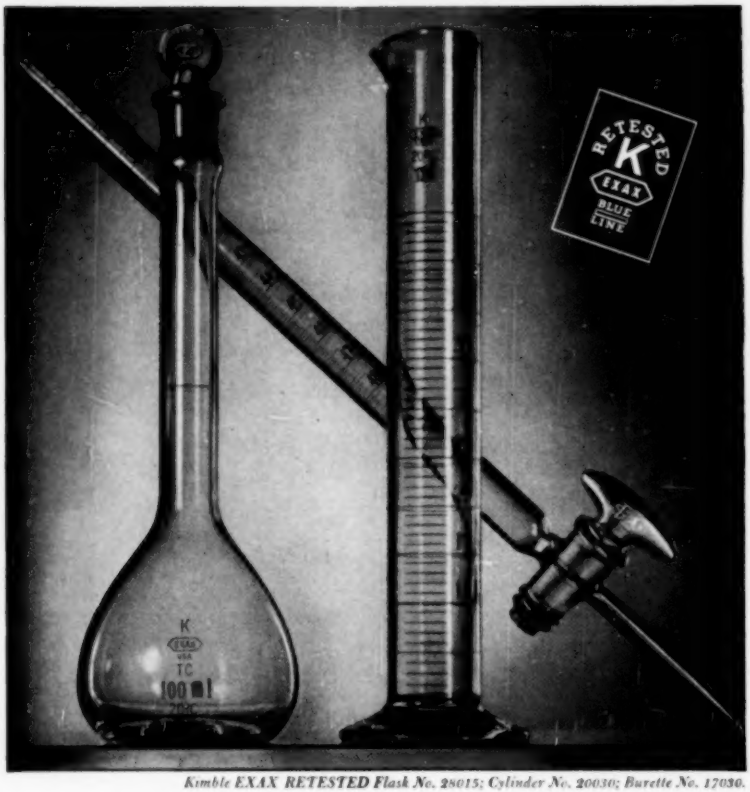
The Effect of Crystal Size on the Estrogenic Activity of Theelin ..... 52
*A. Simond, K. M. Lindquist, F. H. Tendick,* and *L. W. Rowe*

Fungistic and Bacteriostatic Studies on Some Alkynoic Acids ..... 55
*Charles D. Cox, J. C. Forbes,* and *J. H. Wotiz*

Book Reviews ..... 58

Advertising ..... Cover pages 2 3, 4 and pp. I IV

*Copyright 1950, by the American Pharmaceutical Association*




*Kimble EXAX RETESTED Flask No. 28015; Cylinder No. 20030; Burette No. 17030.*

# There's no substitute for EXAX RETESTED quality

**EXAX RETESTED** is America's No. 1 choice for accurate laboratory determinations simply because it is made and intended for that purpose. **EXAX** won't bounce, but it is thoroughly annealed for toughness . . . will stand everyday handling and usage.

The great value of **EXAX RETESTED** lies in certain exclusive advantages. It is a special formula of glass, precision-made by specialty craftsmen.

The fine deep graduations are of a type which readily accepts the permanent fused-in blue filler. *And* . . . all calibrations are marked and checked and *retested* with standards of highest precision.

So remember, if accuracy and fitness for the job are important, there is no substitute for **EXAX RETESTED** glassware.

***Look for the Kimble "K", the visible guarantee of invisible quality***

## KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company

# ANNOUNCEMENT

Prior to 1945, the "Proceedings of the American Pharmaceutical Association," the "Yearbook of the American Pharmaceutical Association," the JOURNAL of the A. PH. A. and the Proceedings number of the JOURNAL of the A. PH. A. included the list of members of the A. PH. A., the list of officers of the ASSOCIATION and its Sections since their beginning, the list of meeting places from the time of organization of the ASSOCIATION and the Constitution and By-Laws, Code of Ethics and similar information. This information has historical value and is of importance to officers and members of committees.

Last year we segregated this information in a single volume which was published as Part II of the March 1949 issue of the Scientific Edition of the JOURNAL. The favorable reception accorded this innovation has caused us to continue it. This time the publication date has been advanced to January and it is our plan to publish a similar supplement each year with the January issue of THIS JOURNAL.

The Supplement includes the official roster and directory of officers and committees for 1949–50 along with current authentic lists of boards of pharmacy and their secretaries, state pharmaceutical associations and their secretaries, the lists and officers of the local and student branches of the ASSOCIATION, and a list of national, sectional, state and local publications in the field of pharmacy.

There is also a list of national pharmaceutical associations and related professional societies, which is referred to frequently by members of the ASSOCIATION in their general and specialized activities.

This Supplement includes a list of active members in good standing as of October 31, 1949. Members who joined the ASSOCIATION after October 1, 1949 have been listed in one of the issues of the Practical Pharmacy Edition of THIS JOURNAL since that date and will be listed in the next Supplement.

Robert P. Fischelis, *Secretary*
AMERICAN PHARMACEUTICAL ASSOCIATION

Scale illustrated is our
No. 540 all Glass Model

Capacity—4 oz. (120 grams)
Sensitivity—1/10 grain
Finish—Genuine light mahogany with chrome plated parts
Price—$130.00 (subject to change without notice)

*PROMPT DELIVERY*
on this as well as other class A scales
No. W35 (all glass in lid) ..... $90.00
No. W33 ..... 75.00

Our scales have no bands or wires to stretch or break.

High quality
Prescription
Scale made by
HENRY TROEMNER
*Manufacturer of the Finest Scales for the Druggist Since 1840*
911 Arch Street
Philadelphia 7, Pa.
(*Send for Circular*)

DETROIT COLLEGE OF PHARMACY AND CHEMISTRY
A co-educational institution offering degree courses in Pharmacy (B.S. Pharm.) and Chemistry (B.S. Chem.). Graduation from an accredited High School or the equivalent is required for admission.
Applicants not candidates for a degree may enroll as special students for courses in BIOLOGY, CLINICAL LABORATORY METHODS, BACTERIOLOGY, and others, provided evidence of prerequisite credit is presented. Each year through the co-operation of the College, the alumni, and Detroit pharmacists, many students are placed in part-time positions. Write for catalog.
*FULLY ACCREDITED REHABILITATION TRAINING FOR RETURNED VETERANS*
DETROIT INSTITUTE OF TECHNOLOGY
2020 Witherell Detroit 26 Michigan

**The Massachusetts College of Pharmacy**
**Longwood Avenue, Boston**

Graduate study in Boston has always appealed strongly to students in the field of medicine and public health. The environment is stimulating and attracts students from all parts of the world. Library, laboratory, hospital, and other facilities for graduate work are outstanding in this area.

The Massachusetts College of Pharmacy is located in a great medical and educational center. It offers unusual opportunities to graduates of colleges of pharmacy who are interested in further study in pharmacy, pharmaceutical chemistry, and pharmacognosy. A few fellowships are available.

**For additional information, write to HOWARD C. NEWTON, Dean.**

PHILADELPHIA
COLLEGE OF PHARMACY
AND SCIENCE
*Founded in 1821*

**Pharmacy, Chemistry, Biology and Bacteriology offer opportunities for interesting and successful careers to properly qualified young men and women who complete B.Sc. degree courses in these fields. Graduate studies lead to M.Sc. and D.Sc. degrees. Coeducational. Write for catalog to the College.**
**43rd St., Kingsessing & Woodland Aves., Philadelphia 4, Pa.**

Published by the American Pharmaceutical Association under supervision of the Committee on Publications with the approval of the Council. Publication office, 20th and Northampton Sts., Easton, Pa. Editorial office: Scientific Edition, 2215 Constitution Ave., Washington 7, D. C.

Annual Subscription—Journal of the American Pharmaceutical Association, complete (both editions): United States and Pan America, $7.00; Canada, $7.70; other foreign, $8.00; members of the American Pharmaceutical Association with dues, $4.00. Each edition, Scientific Edition or Practical Pharmacy Edition: United States and Pan America, $4.00; Canada $4.35; other foreign, $4.50. Single numbers, either edition: United States and Pan America, $0.35; Canada, $0.40; other foreign, $0.50.

Claims for missing numbers will not be allowed (1) if received more than 60 days from date of issue, (2) if loss was due to failure to give 30 days notice of change of address, or (3) if reason for claim is "missing from files."

Entered as second-class matter January 23, 1917, at the Post Office at Easton, Pa., under the act of March 3, 1879, as 24 times a year; Scientific Edition monthly on the fifth; Practical Pharmacy Edition monthly on the 20th. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 10, 1918.

Robert P. Fischelis, *Secretary and General Manager*

# UNIFORM

*Fine chemicals for making*

## SEDATIVES

Do you need a fine chemical of highest purity?

Must it be chemically and physically uniform, lot after lot and month after month?

Manufacturers of sedatives give positive, affirmative answers to these two questions. Fine chemicals are vital ingredients in the making of sedatives, and the reputation of your product and your good name depend upon them.

*Utmost purity* in fine chemicals is demanded because sedatives are for internal use.

*Absolute uniformity* in fine chemicals is demanded because this assures ease in manufacturing sedatives to *precise* dosage.

On this page, are listed several Baker Fine Chemicals for sedatives. In this list, or in the Baker line, there is the right *one* for you. Whichever it is, that fine chemical brings you purity to the decimal, and is regularly available to *uniform* physical standards.

No matter what drug or pharmaceutical product you manufacture—if it requires one or more fine chemicals of *uniformity* and *measured purity*—specify Baker.

Address: J. T. Baker Chemical Co., *Executive Offices and Plant*, Phillipsburg, N. J.

**Which of these Baker Fine Chemicals best suits your formula?**

| | |
|---|---|
| Acetanilid | Sodium Bromide |
| Chloral Hydrate U.S.P. | Chloroform U.S.P. |
| Sodium Pentobarbital | Acetophenetidin |
| Potassium Bromide | Sodium Salicylate |

Acetylsalicylic Acid (Aspirin) U.S.P.

**Baker's Chemicals**

C. P. ANALYZED • FINE • INDUSTRIAL

THE SEARCH *is always* FOR SOMETHING BETTER!

CHOLESTEROL IN ITS MOST ACTIVE AND EFFICIENT FORM

# the AMERCHOLS are *Naturally* better

NON-IONIC OINTMENT BASES*, EMULSIFIERS AND PENETRANTS

The AMERCHOLS are surface-active agents which are Naturally good for the skin. Of Natural Origin, they represent odorless, color-free forms of cholesterol and related rare sterols which we isolate in purified form from animal tissues. They are stable in the presence of acids, alkalies and most drugs.

WE KNOW OF NO CASE OF ALLERGY DUE TO AN AMERCHOL

Pharmaceutical Manufacturers and Chemists: write on your company letterhead for your copy of our technical booklet. Contains valuable data and formulas for the use of the Amerchols in O/W and W/O emulsions, ointments, lotions, creams, hair preparations, etc.

Our Research Laboratories are available to you for advice and information at all times.

* For comparative data on drug penetration and release, irritation and stability of ophthalmic ointments including AMERCHOL see; Sellmann et al; Arch. of Ophthal. Vol. 36; 284, 1946.

AMERICAN CHOLESTEROL PRODUCTS
• INCORPORATED •
MILLTOWN — NEW JERSEY



# CHOLINE BITARTRATE

Now, from the laboratories of America's foremost producer of choline compounds for medicinal use, Chemo Puro is pleased to announce the production of a stable, non-hydroscopic choline salt.

**CHOLINE BITARTRATE**

Priced equal to choline di-hydrogen citrate, it offers a 20% saving due to its choline content of approximately 48%.

*Samples Available Upon Request.*

CHEMO PURO MFG. CORP.

26-32 Skillman Ave. • Long Island City 1 • New York, N. Y.

*Scientific Edition*

# JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

JUSTIN L. POWERS, EDITOR, WASHINGTON, D. C.

VOLUME XXXIX | *JANUARY, 1950* | NUMBER 1 CONSECUTIVE NO. 2

## A Routine Method for the *in Vitro* Assay of Tyrothricin*

By R. J. REEDY and S. W. WOLFSON

**Several methods are described for the extraction of tyrothricin from products containing oil and ointment bases. A simple decimal dilution type of assay of alcohol and propylene glycol solutions is presented. A supplementary method suitable for use as a check for the routine procedure is also included.**

SINCE the discovery of tyrothricin by Dubos (1), there has been a need for a simple, accurate method of assay for the various preparations that have been developed. The methods so far described have not proved entirely satisfactory. The mouse protection test of Dubos (2), using *Diplococcus pneumoniae* as the test organism, is time-consuming, and depends upon two biological variables. Furthermore, various ingredients of commercial preparations other than tyrothricin may be toxic, thus invalidating the results. Much the same criticism may be made of those tests which rely on hemolysis as a measure of tyrothricin, such as the one described by Dimick (3). A rapid chemical method for estimating the tyrothricin content of fermentation liquors was reported by Rittenberg, Sternberg, and Bywater (4). This method measures tryptophane and is sensitive only to about 25 μg./ml. of tyrothricin, and unfortunately does not exclude other sources of tryptophane. In addition to the mouse protection test, Dubos (2) developed a serial dilution method utilizing a sensitive streptococcus. The organism is a nonpathogenic Group D hemolytic streptococcus (Lancefield's strain H-69 D-5). This test, modified in a few particulars, is the *in vitro* test now ordinarily used for assaying tyrothricin products. It forms the basis of the procedure reported here. As does a plate technique developed in this laboratory, Dubos' test gives quite satisfactory results when the tyrothricin is in the form of an alcoholic or propylene glycol solution.

### EXPERIMENTAL

In this investigation, an organism identified as *Streptococcus fecalis* (M-19), has been found more sensitive to the action of tyrothricin than streptococcus H-69 D-5. The M-19 culture has a susceptibility to tyrothricin of 0.002 μg./ml. Its sensitivity to the two components of tyrothricin (gramicidin and tyrocidine) has been found to be 0.0004 and 3.0 μg./ml., respectively. The sensitivity of this organism to tyrothricin reduces the possibility of interference by other ingredients in the emulsion and ointment-type products. The method of assay is

* Received July 19, 1949, from the Federal Security Agency, Food and Drug Administration, Washington 25, D. C.

described below. It should be noted that this organism has, on occasion, dissociated with the development of gramicidin-resistant variants when transferred daily in the assay broth. This may usually be overcome by decreasing the concentration of the nutrients, or if this fails, by making fresh transplants from the original agar culture. In the event that neither of these two methods results in the recovery of organisms highly sensitive to tyrothricin, the broth culture should be streaked on nutrient agar plates and five to eight discrete colonies chosen and transferred to tubes of assay broth. After twenty-four hours' incubation, each culture is tested with standard tyrothricin. At least one of the cultures should show the desired sensitivity.

## ASSAY PROCEDURE

**A. Stock Standard.**—A solution containing 1 mg./ml. of a mixture consisting of 20% crystalline gramicidin and 80% crystalline tyrocidine hydrochloride in 95% ethyl alcohol constitutes the stock standard. Maintain at a temperature not above 15° and take precautions to prevent evaporation.

**B. Working Standard.**—Dilute the stock standard in 95% ethyl alcohol to make 0.1 μg./ml. of tyrothricin. This is the working standard.

**C. Organism**—*Streptococcus fecalis.*—Group D (P. C. I. No. M-19). The use of this highly sensitive organism eliminates the necessity of incorporating serum albumin in the assay medium (5).

**D. Media.**—(1) Nutrient agar for carrying the test organism:

| | |
|---|---|
| Beef extract | 0.5% |
| Peptone | 1.0% |
| NaCl | 0.5% |
| Distilled water | 1000 ml. |

Adjust to *p*H 7.0 before sterlizing

(2) Assay and daily transfer broth:[1]

| | |
|---|---|
| Tryptic digest of lactalbumin[2] | 8.0 Gm |
| Distilled water | 1000 ml. |

**E. Technique of Test.**—*Standard.*—Into the bottom of a triplicate series of sterile test tubes (20 x 150 mm.) transfer amounts of the Working Standard using 0.01-ml. increments. Amounts of 0.3 ml. to 0.08 ml. of 0.1 μg. of tyrothricin per ml. in 95% ethyl alcohol should provide an adequate range and will measure 33% to 125% quantities of tyrothricin. Use 0.2-ml. pipettes for all additions. To obtain consistent results, use tubes which have been washed in 95% ethyl alcohol, cleaned in dichromate-sulfuric acid reagent, thoroughly rinsed in distilled water, sterilized, and dried.

**Sample.**—According to the labeled content, make a dilution containing an amount of tyrothricin equivalent to the Working Standard (0.1 μg./ml). For this purpose use an appropriate solvent. Use 95% ethyl alcohol unless a more appropriate extractive is known. If any solvent other than alcohol is used, do not dilute beyond 100 μg./ml. before continuing the dilution with alcohol to 0.1 μg./ml. Continue the procedure as with the standard. The use of increments greater than 0.01 ml. may be employed to obtain the advantage of a rough estimate of the tyrothricin content.

Seed the assay broth from an eighteen- to twenty-four-hour broth culture of the test organism to give a 1% suspension. Shake the seeded broth thoroughly and add 5 ml. to each tube. Shake thoroughly and incubate at 37° for eighteen to twenty-four hours, or until the standard shows a clear-cut end point. The standard inhibits the growth of the test organism usually in those tubes receiving 0.1 ml. of tyrothricin or 0.002 μg. of gramicidin. The end point is determined as the highest dilution of tyrothricin exhibiting no growth in at least two of the triplicate tubes.

The tyrothricin content of the sample is calculated from the formula $S/X \times 100 = \%$ where $S$ represents the end point in micrograms obtained for the standard and $X$ represents the end point in micrograms for the sample.

The tyrothricin present in many commercial preparations cannot be completely recovered when tested by the above routine procedure. A supplementary test, which consists of adding a known amount of standard tyrothricin solution to the unknown, has been developed, thus permitting a dilution of the compound which shows additive tyrothricin action beyond the dilutions exhibiting interference by other ingredients of the preparation.

## SUPPLEMENTARY METHOD

Add to the sample to be tested an equal volume of the standard diluted to contain an amount of tyrothricin equivalent to that assumed to be in the sample. Dilute the mixture with 95% ethyl alcohol to 0.1 μg./ml. on the basis of the *added tyrothricin standard* and *not* on the sum total of tyrothricin (sample plus standard). Thus, if the sample has been diluted in alcohol to contain 10 μg./ml. of tyrothricin, add 1.0 ml. of the diluted sample to 1.0 ml. of the standard containing 10 μg./ml. The mixture is then diluted with alcohol to contain 0.1 μg./ml. of added tyrothricin standard and is run, in triplicate, by the previously described method, beginning with 0.12 ml. and decreasing the quantities by 0.01 ml. so that tyrothricin percentages may be obtained from 83% to above 200%. The tubes are inoculated with 5 ml. of 1% seeded assay broth, shaken, and incubated.

All of the added tyrothricin standard should be recovered. Any excess obtained would indicate the tyrothricin in the sample.

Because of the variety of vehicles employed in commercial tyrothricin preparations, it has been found necessary to use extraction procedures to prepare samples for assay. These procedures free the tyrothricin from the bases which of themselves may cause bacteriostasis or inhibit the action of the drug. It should be noted, however, that while these methods have proved efficient for some commercial preparations, modifications may be necessary for certain types of products.

A number of commercial preparations utilize tyrothricin in oil and water emulsions. Many of these employ wetting agents, including anionic,

[1] In preliminary work with tyrothricin several types of nutrients for the preparation of culture medium were used. In each case, only certain lot numbers were found suitable for assay purposes, while other batch numbers of the same nutrient proved unsatisfactory. When tested for growth-promoting properties, no differentiation in the various lots could be detected. Only in the presence of tyrothricin was a marked variation noted.

[2] Edamin for tyrothricin assay, "N-Z-TONE," Sheffield Farms Company, Inc., 524 West 57th St., New York 19, N. Y. No adjustment of *p*H has been found necessary for this medium.

cationic and neutral detergents, to stabilize the emulsions. These compounds interfere with the action of tyrothricin, and in addition frequently are in sufficient concentration to exert a bacteriostatic effect of the same dilution at which tyrothricin itself is bacteriostatic. To obtain tyrothricin free from interfering substances, various extractive procedures are required, since most of the incorporated wetting agents are soluble in many solvents, including alcohol. Even oil and water mixtures without detergents interfere with the demonstration of tyrothricin by customary serial dilution methods. For example, the presence of 1 drop of mineral oil in a tube containing the tyrothricin standard is sufficient to reduce the effectiveness of the antibiotic almost 60%.

## EXTRACTION PROCEDURES

For purposes of extraction, tyrothricin products may be divided into several categories.

1. Alcoholic and propylene glycol extracts and concentrates.
2. Troches.
3. Mineral oil emulsions.
4. Ointments.
5. Adhesive gauze pads.

Because of inherent differences in the carrying bases, each type requires separate extraction procedures.

**1. Alcoholic and Propylene Glycol Extracts and Concentrates.**—See "E", Technic of Test, under "Assay Procedure."

**2. Troches.**—Pulverize 2 troches and place in a large test tube. With constant agitation, dissolve in a small amount of warm distilled water. Withdraw 1 ml. of this solution and make the necessary dilutions in 95% alcohol so that a final concentration of 0.1 μg. of tyrothricin per ml. of 95% ethyl alcohol is obtained. Test sample by the routine assay procedure described above.

**3. Mineral Oil emulsions.**—Place 50 ml. of the mineral oil emulsion to be tested in a Gooch-type glass funnel with medium porosity fritted disk. Add about 0.5 Gm. of NaCl and heat in a pressure cooker at 121° for about fifteen minutes, or until the mineral oil emulsion breaks and the heavy white oil emulsion shows a clear oil layer. Allow to cool. Remove the aqueous suspension and oil layer by suction. Wash the remaining precipitate with three 20-ml. portions of warm distilled water to dissolve the salt. It will be noted that the glassware containing the extracted residue of tyrothricin will be coated with a fine layer of fat or wax. Remove as much of this extraneous material as possible by the use of warm distilled water. Allow the precipitate to harden, and then wash again with hot distilled water to reduce the amount of oils and waxes adhering to the particles and glassware. A small amount of the residue will remain with the tyrothricin but this will have little effect on the activity of the antibiotic after it has been diluted. Remove the precipitate from the funnel with a measured quantity of 95% ethyl alcohol, and make dilutions necessary to give a working aliquot containing an estimated 0.1 μg. of tyrothricin per ml.

**4. Ointments.**—Because of the variety of ointment bases incorporating tyrothricin, the use of one extraction procedure for all ointments thus far studied has not been found practicable. The ointments have arbitrarily been divided into two categories: water-soluble and water-insoluble. The water-insoluble types have been most readily assayed by extraction with white gasoline, while the water-soluble types can be prepared for assay by the use of warm distilled water. Although these methods have not yielded assays indicating 100% of tyrothricin at all times, recoveries of 80% or better have been found routinely. It should be noted, however, that in those assays which indicate results less than 100%, the use of the supplementary procedure usually reveals full potency. It will be necessary, therefore, to utilize the supplementary procedure whenever the results are doubtful.

(*a*) *Water-Insoluble Bases.*—Place 10 Gm. of ointment in a 250-ml. separatory funnel and add 100 ml. of white gasoline. Shake well until solution occurs. Add 20 ml. of 95% ethyl alcohol and shake vigorously. Allow this mixture to stand until two layers are formed. If the two layers do not form, a few drops of distilled water will aid in their formation. Filter the lower alcohol layer through filter paper into a second separatory funnel. Repeat this procedure until approximately 90 ml. of the bottom alcohol layer is collected in the second separatory funnel. Withdraw the alcohol layer from the funnel into a 100-ml. volumetric flask. Care should be taken to prevent any residual gasoline from coming over. Dilute to volume with 95% ethyl alcohol. Dilute the sample so that it contains an estimated 0.1 μg./ml. of tyrothricin.

(*b*) *Water-Soluble Bases.*—Dissolve 10 Gm. in 90 ml. of hot distilled water. Withdraw a 1.0-ml. aliquot and dilute with 95% ethyl alcohol so that the final tube contains 0.1 μg. (estimated) of tyrothricin per ml. of alcohol.

**(5) Adhesive Gauze pads.**—Soak the adhesive gauze pad in white gasoline until the adhesive can be easily removed. Allow the gasoline to drain from the pad and then place in a Petri dish and dry for one hour at 37° with the lid of the dish partially removed. Place the pad in a test tube containing 10 ml. of 95% ethyl alcohol. Agitate thoroughly. Withdraw 1.0 ml. and make additional dilutions in alcohol, so that 1.0 ml. of alcohol contains 0.1 μg. (estimated) of tyrothricin.

## SUMMARY

A simple decimal dilution method for the assay of alcohol and propylene glycol solutions of tyrothricin is described, and several methods are given for the extraction of tyrothricin from those products containing oils and ointment bases.

A supplementary method, which serves as a check for the routine procedure, is also included.

## REFERENCES

(1) Dubos, R. J., *J. Exptl. Med.*, **70**, 1(1939).
(2) Dubos, R. J., and Porter, Jean, "Methods for the Determination of the Antibacterial Activity of Products Containing Tyrothricin or Gramicidin" (Mimeographed). Personal Communication.
(3) Dimick, K. P., *J. Biol. Chem.*, **149**, 387(1943).
(4) Rittenberg, S. C., Sternberg, H. E., and Bywater, W. G., *ibid.*, **168**, 183(1947).
(5) Reedy, R. J., and Wolfson, S. W., "The Effects of Normal Horse Serum on the *in Vitro* Activity of Tyrothricin." *J. Clin. Invest.*, **28**, 861(1949).

# The Preparation of Certain Fluoro-Iodo Radiopaque Compounds*,†

By STANLEY G. MITTELSTAEDT‡, § and GLENN L. JENKINS§

**A number of new derivatives of aromatic hydrocarbons in which iodine is *ortho* to fluorine have been prepared, namely: ethyl 3-iodo-4-fluorobenzoate, 3-iodo-4-fluorobenzoic acid, the sodium salt of 3-iodo-4-fluorobenzoic acid, the hydrochloride of the diethylaminoethyl 3-iodo-4-fluorobenzoate, the hydrochloride of the piperidinopropyl 3-iodo-4-fluorobenzoate, the hydrochloride of the diethylamino-2-butyl 3-iodo-fluorobenzoate, the hydrochloride of the di-*n*-butylaminopropyl 3-iodo-4-fluorobenzoate, and the hydrochloride of the 3-(4-morpholino)-propyl 3-iodo-4-fluorobenzoate. All of the compounds exhibit anesthetic, hypnotic, and analgesic effects. Preliminary tests indicate that the compounds are relatively nontoxic but when used in concentrations necessary to produce a desirable opaque, were found to be irritating to the gastric and intestinal tract.**

An ideal radiopaque remains to be found. Many of the contrast agents have been known to produce toxic reactions, various side effects, and allergic reactions. For these and various other reasons, the problem of developing a more suitable product presented itself as one worthy of investigation.

What characterizes the properties of an ideal radiographic contrast medium necessitates the consolidation of opinions and suggestions of many investigators and specialists in the field of roentgenography. In general, it might be said that an ideal radiopaque material should be one capable of producing clear, concise shadows of the desired part or parts of the anatomy. It should be capable of selective concentration in certain structures, such as the gall bladder or the kidney, and it should be retained there for a period of time necessary for X-ray diagnosis or visualization and then excreted rather rapidly without toxic effects. It should be easily administered and rapidly carried to the desired location in the body for contrast. It must be stable under normal conditions, not affected by the oxygen in the blood stream or by the blood itself. Lastly, it is desired that the compound be manufactured with relative ease commensurate with the cost characteristics of such contrast products.

The recent development of fluorine chemistry suggests fluorine for possible use in connection with this problem because of its wide range of chemical properties. One outstanding property that it presents is its ability to stabilize relatively unstable and loosely bound groups (1). It exhibits unusual stabilizing properties on the carbon to which it is attached and to the adjacent carbon atoms. It is not entirely known how this is brought about, although it has been reported that the interatomic bond distances between the carbon on which fluorine is attached and the adjacent carbon atoms is shortened by five-hundredths of an Ångström unit (2, 3).

From a chemical and physiological standpoint, a single fluorine atom in an organic aromatic benzene nucleus as in fluorobenzene is said to be completely inert (4). Fluorine or chlorine attached to a ring bearing a sulfonic acid group nullifies the therapeutic activity of otherwise active compounds (5).

The object of this study is, therefore, to prepare certain fluoro-iodo benzene compounds in which it is expected that the relative position of the iodine to the fluorine will have a stabilizing effect which is possibly not affected by enzymatic action in the body. Derivatives of the proposed compounds will be prepared by reacting them with certain alcohols in order to characterize them. Such derivatives will also be tested pharmacologically.

## EXPERIMENTAL

The following intermediates for the preparation of the hydrochloride of 3-amino-4-fluorobenzoic acid have been prepared according to known methods or procedures: the ethyl *p*-fluorobenzoate (6), *p*-fluorobenzoic acid (6), ethyl 3-nitro-4-fluorobenzoate (7), 3-nitro-4-fluorobenzoic acid (8), the hydrochloride of the ethyl 3-amino-4-fluorobenzoate (9), and 3-amino-4-fluorobenzoic acid (9).

**1. The Preparation of the Ethyl 3-Iodo-4-fluorobenzoate.**—The hydrochloride of the ethyl 3-amino-4-fluorobenzoate (1 mole) 110 Gm. was diazotized at 5° with sodium nitrite (1 mole) 36.8 Gm. in a 10%

* Received April 30, 1949, from the Research Laboratories, Purdue University, School of Pharmacy.
Presented to the Scientific Section, A. PH. A., Jacksonville Meeting, April, 1949.
† This work was made possible by the award of a fellowship to S. G. Mittelstaedt by the American Foundation for Pharmaceutical Education.
‡ Present address: University of Texas, College of Pharmacy, Austin.
§ The authors wish to thank Professor H. George DeKay for taking X-ray photos, Professor L. D. Edwards for preliminary pharmacological tests, Dr. Hubert Murphy of Eli Lilly and Company for collaborative tests on irritation and toxicity, and Professor John B. Data for numerous suggestions.

hydrochloric acid (2.5 mole) 450 cc. solution. An equivalent amount of potassium iodide (1 mole) 83 Gm. was added slowly, with stirring, to the diazonium chloride solution. The dark oily liquid was extracted with ether, washed with water, re-extracted with a 10% sodium hydroxide solution, and washed with water. The ether was evaporated and the product distilled at 118–120°/14 mm. Yield 24.9%.

**2. The Preparation of 3-Iodo-4-fluorobenzoic Acid.**—The same general procedure used in preparation No. 1 was used for the above compound. A white precipitate rather than a dark oil was obtained after the addition of the potassium iodide solution. The compound was purified by crystallization from hot isopropyl alcohol; m. p., 175–176°.

This compound was also obtained by saponification of the ethyl ester of 3-iodo-4-fluorobenzoic acid with a 10% alcoholic potassium hydroxide solution and subsequent acidulation with dilute hydrochloric acid. It was purified by recrystallization from hot isopropyl alcohol. Yield, 85.5%, m. p. 175–176°. Analysis calculated on the basis of the neutralization equivalent. Mol. weight: theoretical, 265.92; found, 265.8.

**3. The Preparation of the Sodium Salt of 3-Iodo-4-fluorobenzoic Acid.**—The 3-iodo-4-fluorobenzoic acid (1 mole) 2.66 Gm. was added to an aqueous solution of sodium carbonate (0.8 mole) 1.0 Gm. The solution was filtered and evaporated to dryness. The sodium salt was crystallized from alcohol and water. Yield, 87%.

**4. The Preparation of 3-Iodo-4-fluorobenzoyl Chloride.**—The dried 3-iodo-4-fluorobenzoic acid (1 mole) 38.9 Gm. was refluxed for six hours with 2.5 mole, 20 cc., of thionyl chloride and dry benzene. The excess thionyl chloride and benzene was distilled off under diminished pressure. A yield of 71% was obtained.

**5. The Preparation of the Diethylaminoethyl 3-Iodo-4-fluorobenzoate.**—In the flask containing the 3-iodo-4-fluorobenzoyl chloride were placed 100 cc. of dry benzene and an equivalent amount of diethylaminoethanol (37.5 cc.). The mixture was refluxed on the steam bath for six hours. It was cooled to room temperature and diluted with 100 cc. of cold dilute (10%) hydrochloric acid. The aqueous portion was extracted with ether, made alkaline with sodium carbonate, and the liberated free base was extracted with ether. The combined ether extracts were washed with water and dried over anhydrous potassium carbonate. The ether was evaporated and the free base distilled. B. p., 175–180°/6–8 mm.

**6. The Preparation of the Hydrochloride of the Diethylaminoethyl 3-Iodo-4-fluorobenzoate.**—The light yellow liquid of the diethylaminoethyl 3-iodo-4-fluorobenzoate was dissolved in dry ether, filtered, and cooled in an ice bath. Across the surface of the stirred ether solution was blown a fine stream of dry hydrogen chloride gas. The precipitate formed was collected in a Büchner funnel, washed with cold, dry ether, and dried. The hydrochloride was recrystallized from hot isopropyl alcohol. M. p., 160–161°. Yield, 58.5%.

*Anal.*—Calcd. for $C_{13}H_{18}ClFINO_2$: Cl, 8.83%; N, 3.48%; mol. wt., 401.66. Found: Cl, 8.87%; N, 3.41%.

**7. The Preparation of the Hydrochloride of Piperidinopropyl 3-Iodo-4-fluorobenzoate.**—Using the same procedure as in preparations Nos. 4, 5, and 6, and which also will be used in preparations 8, 9, and 10, the piperidinopropyl alcohol (3.9 Gm.) was refluxed with 8.7 Gm. of the 3-iodo-4-fluorobenzoyl chloride in 100 cc. of dry dioxane. An ethereal solution of the free base was precipitated as the hydrochloride with dry HCl gas. The hydrochloride was crystallized from hot isopropyl alcohol. M. p., 161–162.5°. Yield, 53%.

*Anal.*[1]—Calcd. for $C_{15}H_{18}ClFINO_2$: Cl, 8.35%; N, 3.30%; mol. wt., 425.68. Found: Cl, 8.15%, N, 2.27%.

**8. The Preparation of the Hydrochloride of 3-(4-Morpholino)-propyl 3-Iodo-4-fluorobenzoate.**—The 3-(4-morpholino)-propyl alcohol (5.1 Gm.) was refluxed with 8.7 Gm. of 3-iodo-4-fluorobenzoyl chloride in 100 cc. of dry dioxane for six hours. An ethereal solution of the free base was precipitated as the hydrochloride with dry HCl gas. The hydrochloride was crystallized from hot isopropyl alcohol. M. p., 196–198°. Yield, 25.7%.

*Anal.*—Calcd. for $C_{14}H_{18}ClFINO_3$: N, 3.26%; mol. wt., 429.66. Found: N, 3.23%.

**9. The Preparation of the Hydrochloride of the Diethylamino-2-butyl 3-Iodo-4-fluorobenzoate.**—The diethylamino-2-butyl alcohol (7.35 Gm.) was refluxed with 14 Gm. of 3-iodo-4-fluorobenzoyl chloride in a dry benzene solution. An ethereal solution of the free base was precipitated as the hydrochloride with dry HCl gas. The hydrochloride was crystallized from hot isopropyl alcohol. M. p., 194.5–195.5°. Yield, 63%.

*Anal.*—Calcd. for $C_{18}H_{28}ClFINO_2$: N, 3.25%; mol. wt., 430.71. Found: N, 3.30%.

**10. The Preparation of the Hydrochloride of Di-*n*-butylaminopropyl 3-Iodo-4-fluorobenzoate.**—The di-*n*-butylaminopropyl alcohol (9.5 Gm.) and 14.3 Gm. of 3-iodo-4-fluorobenzoyl chloride were dissolved in 100 cc. of dry benzene and refluxed on a steam bath to insure completion of the reaction. An ethereal solution of the free base was precipitated as the hydrochloride with dry HCl gas. The hydrochloride was crystallized from hot isopropyl alcohol Yield, 21%. M. p., 120–122°.

*Anal.*—Calcd. for $C_{19}H_{29}ClFINO_2$: N, 2.96%; mol. wt., 471.79. Found: 2.93%.

## PHARMACOLOGICAL TESTING

The compounds which were tested and identified as follows were subjected to pharmacological testing. They were tested primarily for their toxicity, and also for their anesthetic and irritant properties. The results are given in Table I.

| Number | Name of the Compound |
|---|---|
| 10 | 3-Iodo-4-fluorobenzoic acid |
| 11 | Ethyl 3-iodo-4-fluorobenzoate |
| 12 | The hydrochloride of the diethylaminoethyl 3-iodo-4-fluorobenzoate |
| 13 | The hydrochloride of the piperidinopropyl 3-iodo-4-fluorobenzoate |
| 14 | The hydrochloride of the diethylamino-2-butyl 3-iodo-4-fluorobenzoate |
| 15 | The hydrochloride of the 3-(4-morpholino)-propyl 3-iodo-4-fluorobenzoate |
| 16 | The hydrochloride of the di-*n*-butylaminopropyl 3-iodo-4-fluorobenzoate |

[1] The analyses of this compound do not check, but the compound is reported for general information.

## ANESTHETIC TEST

**Methods of Testing.**—1. Three drops of the solution of the compound to be tested were put in a guinea-pig's eye, the eye was held shut for one minute, and the wink reflex was observed.

2. The anesthetic activity was also tested by injecting 0.1 cc. subcutaneously on the abdomen and noting the presence or absence of irritation on pricking.

Those compounds showing any significant anesthetic activity are predominantly infiltration anesthetics with low topical anesthetic activity.

## TESTING FOR OPACITY

A series of rats was injected orally with various concentrations of the ethyl 3-iodo-4-fluorobenzoate in a 10% acacia emulsion and X-rayed to determine the characteristic opacity produced by this iodinated compound. In the concentrations necessary to produce a good opacity, the compound appeared to be rather irritating to the gastric and intestinal tracts. Because of this irritation, the testing of this compound as a radiopaque was discontinued.

Another series of rats was injected intravenously in the femoral vein with different concentrations of the sodium salt of 3-iodo-4-fluorobenzoic acid in a physiological saline solution. In all of the rats injected, no opacity or localization of the compound was detected in 1–3% concentrations used. The compound appeared to be rapidly eliminated and rather irritating to the kidneys as evidenced by the frequency of micturition and the appearance of blood in the urine.

## SUMMARY

1. The objective of this investigation was to prepare iodinated derivatives of the aromatic hydrocarbons in which the iodine atom would be *ortho* to a fluorine atom.

2. As a result of this experimentation the following new compounds have been prepared:

Ethyl 3-iodo-4-fluorobenzoate
3-Iodo-4-fluorobenzoic acid
The sodium salt of 3-iodo-4-fluorobenzoic acid
The hydrochloride of the diethylaminoethyl 3-iodo-4-fluorobenzoate
The hydrochloride of the piperidinopropyl 3-iodo-4-fluorobenzoate
The hydrochloride of the diethylamino-2-butyl 3-iodo-4-fluorobenzoate
The hydrochloride of the di-*n*-butylaminopropyl 3-iodo-4-fluorobenzoate
The hydrochloride of the 3-(4-morpholino)-propyl 3-iodo-4-fluorobenzoate

3. The pharmacological testing of the compounds indicates that all the compounds displaying a local anesthetic activity also show a hypnotic and analgesic effect. Test animals became quite depressed, but returned to normal when the effect of the drug had disappeared. Due to the stabilizing effect of the fluorine atom and to its relative inertness, it was expected that the compounds synthesized would have a rela-

TABLE I.—PHARMACOLOGICAL TESTING OF THE COMPOUNDS FOR TOXICITY, ANESTHETIC, AND IRRITANT PROPERTIES[a]

| Sample No. | Concn. %, Gm./100 cc. | Duration of Anesthesia, Min. Guinea Pigs' Eyes | Duration of Anesthesia, Min. Guinea Pigs' Skin | Irritation, Degree Rabbits' Skin | M. L. D., White Mice Intrav. Mg./Kg. | M. L. D., White Mice Subcutan. Mg./Kg. |
|---|---|---|---|---|---|---|
| 10 | 1[b] | .. | .. | Slight | ... | 845 |
| 11 | 1[c] | .. | .. | Moderate | ... | 880 |
| 12 | 1 | 7 | 17 | Moderate | 98 | 1150 |
| 13 | 1 | 32 | 42 | Moderate | 56 | 573 |
| | 0.1 | 0 | 20 | Moderate | ... | .. |
| 14 | 1 | 48 | 53 | Moderate | 57 | 600 |
| | 0.25 | 22 | 38 | Moderate | ... | .. |
| | 0.1 | 0 | 17 | Slight | ... | .. |
| 15 | 2[d] | 10 | 72 | Moderate | 155 | 2050 |
| | 0.1 | 0 | 27 | Slight | ... | .. |
| 16 | 1[e] | 0 | 75 | Severe | 55 | 3000 |
| | 0.1 | 0 | 31 | Negligible | ... | .. |
| | | Comparison of Activity | | | | |
| Metycaine | 2.0 | 22 | .. | Slight | 26.4 | 590 |
| Procaine | 4.0 | 10 | .. | Mild | 40 | 590 |
| Butyn | 2.0 | 19 | .. | Slight | 12 | .. |
| Nupercaine | 0.1 | 30 | .. | Slight | 6 | .. |

[a] All compounds displaying a local anesthetic activity also showed a hypnotic and analgesic effect. Test animals became quite depressed, but returned to normal when the effect of the drug had declined.

[b] As a sodium salt (1% acid concentration) at about a pH of 7.0.

[c] An aqueous suspension in sterile distilled water with a 2% solution of "Tween 80" (Polyoxyalkylene derivative of sorbitan monoleate from Atlas Powder Co.) was administered orally to white mice and the effects were observed. (Subcutaneous M. L. D. (white mice) for "Tween 80" is equal to 8.32 mg. or 0.35 cc./Kg.)

[d] This compound appears to be the best local anesthetic of the series. It is very soluble and produces in a 2% concentration prolonged anesthesia of the rabbit's eye with only moderate irritation. It appears that as the pH of the solution is increased the irritation is decreased. Toxicity is very low by both routes, being about one-third that of procaine.

[e] This compound displays a tendency to precipitate in the eyes, and when injected into the tissues the subcutaneous M. L. D., therefore, cannot be interpreted as being too reliable.

tively low toxicity. The pharmacological report on these compounds indicates that most of them have a low toxicity. The ethyl 3-iodo-4-fluorobenzoate and the sodium salt of the free acid were tested for their ultimate use as radiopaques. The compounds, when used in the concentrations necessary to produce a distinct shadow of the gastrointestinal tract, proved to be rather irritating to the gastric and intestinal tract. They appear to be rapidly eliminated.

## REFERENCES

(1) Finger, G. C., *Chem. & Met. Eng.*, **51**, 101(1944).
(2) Pauling, L., "The Nature of the Chemical Bond," Cornell University Press, Ithaca, New York, 1945.
(3) Jenkins, G. L., and Hartung, W. H., "The Chemistry of Organic Medicinal Products," John Wiley and Sons, New York, 1943, p. 225.
(4) Whitmore, F. C., "Organic Chemistry," D. Van Nostrand Co., New York, 9th Printing, 1945, p. 724.
(5) Crossly, M. L., Northey, E. H., and Hultquist, M. E. *J. Am. Chem. Soc.*, **60**, 2220(1938).
(6) Schiemann, G., and Winkelmuller, W., "Organic Syntheses," John Wiley and Sons, New York, Coll. Vol. II, 1947, pp. 299–301.
(7) Kamm, O., and Segur, J. B., "Organic Syntheses," John Wiley and Sons, New York, Coll. Vol. I, 1947, pp. 372–373.
(8) Rouche, H., Bull. acad. roy. méd. Belg., Series No. 5, 1, 534(1921).
(9) Adams, R., and Voorhees, V., "Organic Syntheses," John Wiley and Sons, New York, Coll. Vol. I, 1947, p. 61.

---

# Synthetic Analogs of the Adrenal Cortical Hormones

## II. Synthesis of 4,4′-Bis(acetoxyacetyl)-α,α′-diethylstilbene*

By GEORGE P. HAGER and RAYMOND M. BURGISON

**A continuation of the study of synthetic analogs of the adrenal cortical hormones has been undertaken. 4,4′-Bis(acetoxyacetyl)-α,α′-diethylstilbene (I) has been prepared by way of the following intermediates: *p*-bromopropiophenone; *p*-bromopropiophenone hydrazone; *p*-bromophenylethyldiazomethane; 1,2-bis(*p*-bromophenyl)-1,2-diethylethylene sulfone; *trans*-4,4′-dibromo-α,α′-diethylstilbene; 4,4′-dicyano-α,α′-diethylstilbene; α,α′-diethyl-4,4′-stilbene dicarboxylic acid; α,α′-diethyl-4,4′-stilbene dicarboxylic acid chloride; 4,4′-bis(diazoacetyl)-α,α′-diethylstilbene. Further studies on the hydrolysis of (I) and the preparation of other derivatives are now in progress.**

IN A PREVIOUS report on the study of synthetic analogs of adrenal cortical hormones (1), it was pointed out that in a search for an active synthetic analog of adrenal cortical hormones the relationship between the natural and synthetic estrogens should be taken into consideration. The successful substitution of the α,α′-diethylstilbene and related nuclei for the estratriene or estrapentaene nuclei of natural estrogens, makes desirable an investigation of synthetic analogs of adrenal cortical hormones in which the 4-pregnene nucleus characteristic of the natural hormones has been similarly substituted. The use of an α-keto alcohol side chain, α,β-unsaturated ketone grouping, alcoholic hydroxyl, or some combination of these, is predicated on the presence of these structural features in the natural cortical hormones.

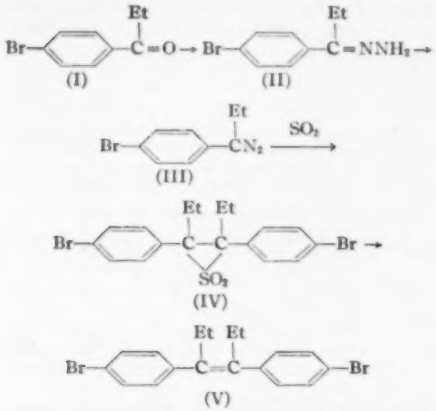
The purpose of the present investigation was the extension of the series of compounds reported by Hager and Shonle (1), and involved the preparation of compounds that are more closely analogous to diethylstilbestrol as regards the structure of the ring system. In the course of this work, 4,4′-bis (acetoxyacetyl)-α,α′-diethylstilbene has been prepared. Homologs in which other alkyl groups are located in the α and α′ positions are being prepared, and will be reported in a future publication.

Methods considered for the preparation of the key intermediate needed in this work, 4,4′-dibromo-α,α′-diethylstilbene (V), were based on procedures found to be useful in the preparation of analogous estrogenic α,α′-diethylstilbene derivatives (2).

The method of Vargha and Kovacs (3) for the conversion of *p*-bromopropiophenone (I) to V, was considered the most direct and convenient of the various possible routes, and was employed in this investigation. These workers reported

* Received April 30, 1949, from The School of Pharmacy, University of Maryland, Baltimore.
Presented to the Scientific Section, A. PH. A., Jacksonville meeting, April, 1949.

a 70 to 80 per cent over-all yield of V, which was obtained as a mixture of *cis* and *trans* isomers:

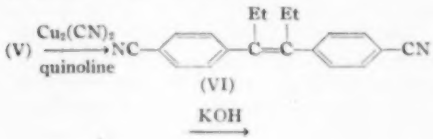


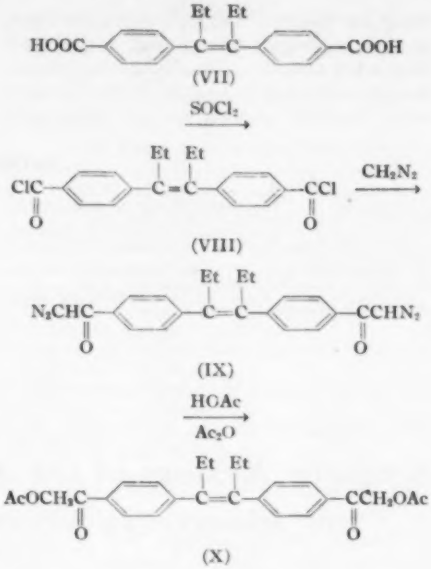
Vargha and Kovacs (3) prepared *p*-bromopropiophenone hydrazone (II) by heating the corresponding azine with anhydrous hydrazine at 120–130° for thirty hours. It has been found, however, that 85 per cent hydrazine hydrate can be used in preparing the hydrazone directly from the ketone if the water is removed continuously by azeotropic distillation. This procedure proved to be quite convenient and general, and good yields of hydrazones were obtained in this manner from a number of aromatic ketones.

Difficulties encountered in the oxidation of II to III and in the similar oxidation of other hydrazones (4), may have resulted from use of an unsatisfactory grade of mercuric oxide as the oxidizing agent. When the conversion of *p*-bromopropiophenone failed for this reason, the chief product isolated was *p*-bromopropiophenone azine (4). When freshly precipitated mercuric oxide was used, however, the reaction proceeded readily and a good yield of *p*-bromophenyl ethyl diazomethane (III) was obtained.

The succeeding steps in the procedure outlined above were carried out without difficulty according to methods previously reported (3), and 50–75 per cent yields of V were obtained.

Conversion of 4,4′-dibromo-$\alpha,\alpha'$-diethylstilbene (V) to 4,4′-bis(acetoxyacetyl)$\alpha,\alpha'$-diethylstilbene (X) was accomplished by application of procedures used for the preparation of similar compounds by Hager and Shonle (1):





## EXPERIMENTAL

***p*-Bromopropiophenone Hydrazone.**—A mixture of *p*-bromopropiophenone (25.5 Gm.; 0.125 mole), 85% hydrazine hydrate (22.7 Gm.; 0.6 mole), sec-butyl alcohol (150 cc.), and toluene (40 cc.) was placed in a 500-cc. round-bottom flask, fitted with a Dean and Stark moisture trap and a reflux condenser. After refluxing for about six hours or until no more water distilled over (constant volume in the trap), the solvent was distilled off under reduced pressure at the temperature of a boiling water bath. A yellow viscous oily residue which crystallized on cooling, was obtained. Recrystallization from petroleum ether produced colorless crystals of *p*-bromopropiophenone hydrazone, m.-p. 35°.[1] The product was generally employed without recrystallization, and the over-all yield of 4,4′-dibromo-$\alpha,\alpha'$-diethylstilbene prepared from the crude product indicated a near quantitative yield of the hydrazone in the above reaction.

Other ketones (benzil, benzophenone, desoxybenzoin, and others) were converted to the corresponding hydrazones in yields which indicated that the method might be generally applicable.

***p*-Bromophenyl Ethyl Diazomethane.**—The yellow mercuric oxide required for the oxidation of the *p*-bromopropiophenone hydrazone was prepared by treating a solution of mercuric chloride (65 Gm.) in boiling water (700 cc.) with an excess of 10% sodium hydroxide solution, added slowly and with constant stirring. The precipitated yellow mercuric oxide was washed with 600-cc. portions of water five or six times by decantation.

The moist mercuric oxide was added to a chilled solution of *p*-bromopropiophenone hydrazone (prepared from 0.125 mole of *p*-bromopropiophenone) in petroleum ether (150 cc.) in a pressure bottle.

[1] Fisher Johns melting-point apparatus.

The temperature was not allowed to rise above 12° during the addition of the mercuric oxide to the solution. The bottle was wrapped in a cold towel and shaken mechanically for four hours. The shaking was interrupted at frequent intervals to change the towel, and the bottle was opened at least once an hour to release the pressure. By means of the wet towels, the temperature was maintained at 15–25° during the four-hour period.

The resulting deep red solution was immediately decanted into a chilled separatory funnel. After separating the water layer, the solution was quickly filtered into a 250-cc. cylinder immersed in an ice bath. The precipitate was washed with cold petroleum ether and the washings added to the filtrate. It was necessary to treat the solution of *p*-bromophenyl ethyl diazomethane immediately with sulfur dioxide as indicated below, since it is quite unstable.

**1,2-Bis(*p*-bromophenyl)-1,2-diethyl-ethylene Sulfone.**—A rapid stream of sulfur dioxide, introduced through a gas dispersion tube, was passed into the petroleum ether solution of the *p*-bromophenyl ethyl diazomethane in a 250-cc. cylinder immersed in a deep ice bath. Vigorous evolution of nitrogen took place and the solution was rapidly decolorized. When the solution had become colorless (or pale yellow) and sulfur dioxide was no longer absorbed, the gas dispersion tube was removed. After a short time crystals of the sulfone separated on the sides of the cylinder. The cylinder and contents were allowed to stand under a hood at room temperature for at least one day and sulfur dioxide was evolved during this time.

***cis*- and *trans*-4,4′-Dibromo-α,α′-diethylstilbene.**—The petroleum ether solution of the crude sulfone and its decomposition products was transferred to a 500-cc. round-bottom flask. Any residue remaining in the cylinder was added to the flask with the aid of a little warm petroleum ether. After removal of the petroleum ether on a steam bath, the flask was connected to a short air condenser and immersed in an oil bath. The system was evacuated through the air condenser and the flask heated to 150° until gas evolution from the molten material was no longer observed. The flask was then removed from the oil bath and allowed to cool while still evacuated. Absolute alcohol (250 cc.) was added and the flask warmed until practically all the residue had dissolved. The solution was filtered while still hot.

On cooling the filtrate, small colorless needles of *trans*-4,4′-dibromo-α,α′-diethylstilbene separated. The crystals were immediately removed by filtration and the filtrate concentrated slightly by evaporation on a steam bath. On cooling, another batch of the *trans*-isomer separated. By repeating this process of evaporation, cooling, etc., the less soluble *trans*-isomer was separated from the mixture. Yield, 12 Gm. (52%). M. p. 125–126° (reported 125°) (3).

The next component of the mixture to separate was *p*-bromopropiophenone azine. This substance appeared as a contaminant of the last fraction of the *trans*-isomer and was easily recognized by its orange-yellow color. When the azine began to crystallize, the solution was filtered and evaporated to about two-thirds of its original volume. On cooling, the azine crystallized out almost completely. Yield 2.0 Gm. (7.9%). M. p. 112°.

The mother liquor remaining after separation of the azine was evaporated to about one-half of its original volume and allowed to stand in an open vessel at room temperature until crystals of the very soluble *cis*-4,4′-dibromo-α,α′-diethylstilbene formed (after standing for about one week). The *cis*-isomer crystallized in small diamond-shaped crystals, m. p. 74°. Yield 4.0 Gm. (16.8%). If the mother liquor was evaporated to too small a volume, a gummy amorphous substance was obtained and no crystalline *cis*-isomer could be isolated.

**4,4′-Dicyano-α,α′-diethylstilbene.**—A mixture of *trans*-4,4′-dibromo-α,α′-diethylstilbene (8 Gm.; 0.02 mole), cuprous cyanide (5.4 Gm.; 0.03 mole), and quinoline (40 cc.) was refluxed for six hours. The solution after refluxing was dark brown and homogeneous. The hot solution was cautiously poured into 600 cc. of concentrated hydrochloric acid. The resulting mixture was extracted with 600 cc. of chloroform, using one 300-cc. and three 100-cc. portions. The combined chloroform extract was washed with three 300-cc. portions of water and distilled to dryness. The residue, 7.5 Gm., was used without further purification for the preparation of α,α′-diethyl-4,4′-stilbenedicarboxylic acid.

A small portion of the dinitrile, purified according to the method of Barber and Slack (4), melted at 216° (reported 216°).

**α,α′-Diethyl-4,4′-stilbenedicarboxylic Acid.**—The crude 4,4′-dicyano-α,α′-diethylstilbene from the previous experiment was refluxed vigorously with 100 cc. of 10% solution of potassium hydroxide in propylene glycol until ammonia was no longer evolved (five hours). The hot reaction mixture was poured into 800 cc. of water and filtered through fine glass wool. Dilute sulfuric acid was then added with constant stirring until the light tan flocculent precipitate of α,α′-diethyl-4,4′-stilbenedicarboxylic acid no longer formed. The mixture was heated to coagulate the crude acid, filtered, and the filter cake dissolved in 5% sodium bicarbonate solution. The filtered solution was acidified with dilute sulfuric acid until a precipitate no longer formed. The precipitate was filtered and dried, and the white finely divided acid recrystallized from glacial acetic acid. Yield 5.2 Gm. (66% based on the 4,4′-dibromo-α,α′-diethylstilbene). The crystals did not have a definite melting point but decomposed between 250 and 300°. Neutral equivalent: 323 (calculated 324.4).

*Anal.:* Calcd. for $C_{20}H_{20}O_4$: C, 74.2; H, 6.25. Found: C, 74.1; H, 6.41.

**α,α′-Diethyl-4,4′-stilbenedicarboxylic Acid Chloride.**—A mixture of α,α′-diethyl-4,4′-stilbenedicarboxylic acid (16 Gm.; 0.043 mole) and thionyl chloride (75 cc.) was refluxed until solution was complete. The excess thionyl chloride was then removed by distillation under reduced pressure on a steam bath, and the dry residue remaining in the flask was dissolved in a small amount of boiling dioxane. The solution was filtered and the filtrate cooled in an ice bath. Tiny colorless needles separated from the dioxane solution. Yield 10 Gm. (64%). M. p. 145–146°.

**4,4′-Bis(diazoacetyl)-α,α′-diethylstilbene.**—α,α′-Diethyl-4,4′-stilbenedicarboxylic acid chloride (3.61 Gm.; 0.01 mole) was dissolved in dioxane (100 cc.) and added in one portion to a cold ether solution of diazomethane prepared from 18.5 Gm. of nitrosomethylurea. The mixture, in a 1-L Erlenmeyer flask stoppered with a calcium chloride tube, was

kept in a refrigerator for five hours with occasional shaking. It was then allowed to remain undisturbed in the refrigerator for twenty-four hours longer. By filtration of the reaction mixture, 1.4 Gm. (32%) of a light yellow, fine crystalline material was obtained. The crystals decomposed between 250° and 300°. They decomposed violently if heated over an open flame. The material was used immediately for the next reaction.

**4,4′-Bis(acetoxyacetyl)-α,α′-diethylstilbene.**—The bis-diazomethyl ketone (1.1 Gm.; 0.035 mole), obtained in the previous step, was dissolved in a mixture of equal parts of glacial acetic acid and acetic anhydride (25 cc.). Solution took place immediately with vigorous evolution of nitrogen. The reaction mixture was then refluxed for one hour and filtered. After standing in a refrigerator overnight, 0.5 Gm. (34%) of a brownish yellow crystalline product was obtained which crystallized from alcohol in fine, pale yellow needles. M. p. 185–186°.

*Anal.*[2]—Calcd. for $C_{26}H_{28}O_8$: C, 71.8. Found: C, 72.1.

## SUMMARY

A new synthetic analog of the adrenal cortical hormones, 4,4′-bis(acetoxyacetyl)-α,α′-diethylstilbene has been prepared by a series of reactions involving the following intermediates: 4,4′-dibromo-α,α′-diethylstilbene; 4,4′-dicyano-α,α′-diethylstilbene; α,α′-diethyl-4,4′-stilbenedicarboxylic acid; α,α′-diethyl-4,4′-stilbenedicarboxylic acid chloride and 4,4′-bis(diazoacetyl)-α,α′ diethylstilbene.

The preparation of the intermediate, 4,4′-dibromo-α,α′-diethylstilbene was carried out by a previously reported procedure, involving the oxidation of *p*-bromopropiophenone hydrazone with yellow mercuric oxide and conversion of the resulting *p*-bromophenyl ethyl diazomethane to 4,4′-dibromo-α,α′-diethylstilbene by way of an intermediate sulfone. A method is described for the preparation of the *p*-bromopropiophenone hydrazone which proved to be quite convenient, productive of good yields and apparently of general applicability.

[2] The analytical values for hydrogen were somewhat inconsistent: calculated for $C_{26}H_{28}O_8$: H, 6.46. Found: 7.28.

## REFERENCES

(1) Hager, G. P., and Shonle, H. A., *J. Am. Chem. Soc.*, **68**, 2167(1946).
(2) Solmssen, U. V., *Chem. Rev.*, **37**, 481(1945).
(3) Vargha, L. V., and Kovacs, E., *Ber.*, **75**, 794(1942).
(4) Barber, H. J., and Slack, R., *J. Chem. Soc.*, 612(1944); Linnell, W. H., and Sharma, V. R., *Quart. J. Pharm. Pharmacol.*, **12**, 263(1939).

# The Determination of Phenolphthalein in Mineral Oil Emulsion*

By ALEXANDER T. WARREN, JOHN E. LOGUN, and RAYMOND L. THATCHER

**A volumetric method based on the iodination of phenolphthalein in an alkaline medium has been applied to the assay for that compound in emulsions. The emulsion is broken by the addition of an acidified solution of sodium chloride. Any glycerin or other solvent capable of absorbing iodine is then removed, the mixture made alkaline with sodium hydroxide, and then treated with an excess of standard iodine solution. After iodination is complete, the excess iodine is determined.**

THE phenolphthalein contents of pharmaceutical preparations have been determined by methods based on both gravimetric (1–5), and colorimetric procedures (6). These methods have shortcomings for the purposes of rapid and accurate routine control analysis. The gravimetric methods are lengthy and cumbersome. The colorimetric methods, based on the formation of a red color in alkaline media, suffer inaccuracies because of the absorption of $CO_2$ from the atmosphere and the subsequent fading of the color. Recently, however, Frederick and Koff (7), have published a colorimetric procedure which results in good color stability in alkaline solutions of 95 per cent alcohol.

A volumetric procedure based on the iodination of phenolphthalein in an alkaline medium to tetraiodophenolphthalein (8), has been developed. Substances which will absorb iodine (glycerin, principally) are removed from the emulsion by means of a slightly acidified solution of sodium chloride. The latter breaks the emulsion, forming a clear, lower aqueous layer and an upper layer consisting of finely divided curds of mineral oil, emulsifying agents and phenolphthalein. After the glycerine has been removed completely, the upper layer is made strongly alkaline with

* Received June 24, 1949, from the Quality Control Division, Brooklyn Laboratories, E. R. Squibb and Sons.

sodium hydroxide solution and then treated with a known quantity of standard iodine solution. Completion of iodination is indicated by a color change. The excess iodine is titrated with standard sodium thiosulfate solution in acid medium.

## EXPERIMENTAL

In the extraction process the concentration of acid in the sodium chloride solution is of prime importance. Too strongly acid solutions yield high assay results. This may be due to the partial hydrolysis of the gum-emulsifying agents which remain in the upper curd layer and which may upon subsequent treatment with strong alkali release simple sugars which absorb iodine. The optimum acid concentration was found to be 0.25% hydrochloric acid in a 25% sodium chloride solution.

The fundamental reaction which takes place between the iodine and the phenolphthalein is as follows:

$$C_{20}H_{14}O_4 + 4I_2 + 6NaOH \rightarrow C_{20}H_8I_4O_4\,Na_2 + 4NaI + 6H_2O$$

Side reactions between excess $I_2$ and excess NaOH also take place but upon acidification before titration with sodium thiosulfate, all iodine not reacting according to the fundamental equation is reformed as $I_2$.

**Assay Procedure.**—Approximately 10 cc. of the mineral oil emulsion is poured into a 125-cc. separatory funnel from a tared, glass-stoppered weighing bottle, the weight of sample being obtained by difference. Thirty cc. of 25% sodium chloride containing 0.25% hydrochloric acid is added to the separatory funnel and the mixture shaken continuously for five minutes. The mixture is allowed to separate and the lower aqueous layer is drawn off onto a 12.5-cm. filter paper which has been wetted with distilled water and which contains 1 Gm. of Hyflo Super Cel. The extraction is repeated with 30 cc. of the sodium chloride solution and then with four successive 20-cc. portions, in each case the aqueous layer being filtered through the Hyflo Super Cel. The clear filtrate is discarded. The filter paper is finally washed with two 20-cc. portions of the sodium chloride solution and placed in a 500-cc. glass-stoppered Erlenmeyer flask. Thirty cc. of NaOH (U. S. P. XIII Test Solution) are added to the material in the separatory funnel and the mixture is shaken for one minute. The contents of the separatory funnel are transferred to the 500-cc. glass-stoppered Erlenmeyer flask containing the filter paper. The separatory funnel is rinsed quantitatively with a total of about 50 cc. of distilled water. The total volume of liquid in the flask should not exceed 125 cc. Fifty cc. of 0.1 *N* iodine solution (U. S. P. XIII V. S.) are added from a burette. The flask is stoppered and shaken occasionally until the pink color has been discharged and the mixture assumes a white color with a greenish yellow tint. Fifteen cc. of hydrochloric acid is added to the flask and the excess liberated iodine immediately titrated with 0.1 *N* sodium thiosulfate solution (U. S. P. XIII V. S.) using starch (U. S. P. XIII T. S.) as an indicator. A blank is prepared by adding to a 500-cc. glass-stoppered Erlenmeyer flask the following: 30 cc. of NaOH (U. S. P. XIII T. S.), 15 cc. of hydrochloric acid, 75 cc. of distilled water, one 12.5 cm. filter paper, 1 Gm. of Hyflo Super Cel, and 25 cc. of 0.1 *N* iodine solution (U. S. P. XIII V. S.).

In accordance with the equation, 1 gram equivalent of phenolphthalein reacts with 8 gram equivalents of iodine. Therefore, 1 cc. of 0.1 *N* $Na_2S_2O_3$ is equivalent to 0.003979 Gm. of phenolphthalein.

The results of several assays using samples of mineral oil emulsion to which known amounts of phenolphthalein were added are tabulated in Table I. Assay results obtained on several brands of mineral oil emulsion with phenolphthalein are tabulated in Table II.

TABLE I

| Chemist | Phenolphthalein Amount Added, % | Phenolphthalein Amount Found, % |
|---|---|---|
| *A* | 0.34 | 0.34 |
| *B* | 0.34 | 0.32 |
| | | 0.32 |
| | | 0.32 |
| | | 0.32 |
| *C* | 0.34 | 0.34 |
| | | 0.35 |
| | | 0.35 |
| | | 0.33 |
| *D* | 0.34 | 0.31 |
| | | 0.32 |
| | | 0.35 |
| | | 0.35 |
| *E* | 0.34 | 0.33 |
| *F* | 0.34 | 0.31 |
| | | 0.33 |

TABLE II

| Sample | Phenolphthalein Label Strength, % | Phenolphthalein Amount Found, % |
|---|---|---|
| *A* | 0.34 | 0.33 |
| *B* | 0.34 | 0.33 |
| *C* | 0.34 | 0.35 |
| *D* | 0.30 | 0.33 |
| *E* | 1.00 | 1.08 |
| *F* | 0.31 | 0.35 |

## SUMMARY

A simple and satisfactory volumetric method for the determination of phenolphthalein iodometrically in mineral oil emulsions is described.

## REFERENCES

(1) Kollo, K., *Pharm. Praxis*, **7**, 341(1908).
(2) Palkin, S., *J. Ind. Eng. Chem.*, **12**, 766(1920).
(3) Bickford, C. F., and Schoetzow, R. E., THIS JOURNAL, **25**, 1128(1936).
(4) O'Keefe, H. F., *J. Assoc. Offic. Agr. Chemists*, **25**, 843(1942).
(5) O'Keefe, H. F., *ibid.*, **26**, 311(1943).
(6) Serrallach, J. A., and Owen, R. J., THIS JOURNAL, **20**, 681(1931).
(7) Frederick, M., and Koff, A., *ibid.*, **35**, 158(1946).
(8) Jenkins, G. L., and Hartung, W. H., "The Chemistry of Organic Medicinal Products," ed. 1, John S. Swift Co., Inc., St. Louis, 1941, p. 190.

# A Study of 2-Methylaminoheptane, "Oenethyl"*,†

By F. E. SHAFFER and P. K. KNOEFEL

**The action of 2-methylaminoheptane (Oenethyl) in normal man and in the anesthetized dog has been compared with that of desoxyephedrine. As a vasopressor agent, Oenethyl was found to be about one-fifth as active as desoxyephedrine. Comparative acute lethal toxicity studies reveal that of 2-methylaminoheptane (Oenethyl) to be of about the same degree as that of 2-aminoheptane on subcutaneous and intravenous administration. The chronic toxicity studies indicate that the smallest intake at which a deleterious effect is noted is 23 mg. per Kg. body weight per animal per day.**

ALTHOUGH the vasopressor activity of aliphatic amines was described in 1909–1910 (1), and again in 1935 (8), it was not until 1942 that a description (2), of the therapeutic value of 2-aminoheptane heralded a new interest in such compounds (3, 4). One of these, 2-methylaminoheptane ("Oenethyl"), after study in animals (5, 6), was shown to be of clinical value as an adjunct in spinal anesthesia (7).

It is the purpose of this report to provide further information on the action of 2-methylaminoheptane in normal man and in the anesthetized dog as compared with the action of desoxyephedrine, and to present the results of comparative acute toxicity studies of these two drugs and 2-aminoheptane in several species of animals, as well as the results of chronic toxicity studies in rats.

2-Methylaminoheptane was supplied as the hydrochloride in 5 and 10 per cent solution, and as the mucate, in the solid form. The hydrochloride was used for administration of single doses by injection or orally to man and experimental animals. The mucate was used for incorporation into the food in the rat-feeding experiments. The dosages mentioned refer to milligrams of the hydrochloride, when it was used. In the case of the mucate, the amounts referred to are of 2-methylaminoheptane base.

For comparison, 2-aminoheptane ("Tuamine Sulfate"), 10 per cent solution, and *r*-desoxyephedrine hydrochloride, 10 per cent solution and compressed tablets, were used.

## EXPERIMENTAL

**Activity in Man.**—2-Methylaminoheptane was given to two normal, fasting, resting men, subcutaneously and by mouth, in comparison with desoxyephedrine, by mouth. Arterial pressure was determined by the auscultatory method, pulse rate was counted at the wrist, and observations were made of other objective and subjective phenomena. The results were as follows.

**Subject F. S.**

| | | |
|---|---|---|
| | Desoxyephedrine HCl | |
| 10 mg. | *Per os* | No effect |
| 50 mg. | *Per os* | See Fig. 1. Symptoms of dizziness, muscular weakness, sleeplessness |
| | 2-Methylaminoheptane HCl | |
| 100 mg. | *Per os* | Slight pressor effect. No symptoms |
| 200 mg. | *Per os* | See Fig. 1. Slight feeling of fullness in the head. No sleeplessness |
| 100 mg. | Subcutaneously | See Fig. 1. Slight feeling of fullness in head, slightly uneasy, some palmar perspiration |

**Subject O. Z.**

| | | |
|---|---|---|
| | Desoxyephedrine HCl | |
| 10 mg. | *Per os* | No effect |
| 20 mg. | *Per os* | No effect |
| 50 mg. | *Per os* | See Fig. 1. Symptoms of dizziness, muscular weakness, dryness of nose and mouth, sleeplessness |
| | 2-Methylaminoheptane HCl | |
| 100 mg. | *Per os* | No effect |
| 200 mg. | *Per os* | No effect |
| 300 mg. | *Per os* | See Fig. 1. Symptoms of dizziness, faintness, uneasiness, dryness of nose and mouth, face feels hot and perspiring. On taking food three and one-half hours later, nausea and vomiting |
| 100 mg. | Subcutaneously | See Fig. 1. No symptoms |

**Activity in the Dog.**—In barbitalized dogs, 2-methylaminoheptane was compared with epinephrine and desoxyephedrine for influence on arterial pressure, as recorded with a mercury manometer connected with a carotid artery. When 2-methylaminoheptane was injected intravenously in doses of 0.5 to 2.5 mg./Kg., it produced an increase in arterial pressure of 15 to 80 mm. Hg. This rise in pressure was frequently, but not always, preceded by a fall of 20 to 30 mm., which lasted about ten seconds. This fall in pressure tended to be greater with repeated injections. At this level of response, 2-methylaminoheptane is about $^1/_{200}$ to $^1/_{400}$ as active as epinephrine, considering the dose required to produce the same degree of rise in arterial pressure. The duration of action was greater with 2-methylaminoheptane. While the arterial pressure usually returned to its original level within two minutes after the injection of these doses of epinephrine, it

* Received June 17, 1949, from the Department of Pharmacology, University of Louisville School of Medicine, Louisville, Ky.

† This study was supported in part by a grant from Bilhuber-Knoll Corp., Orange, N. J.

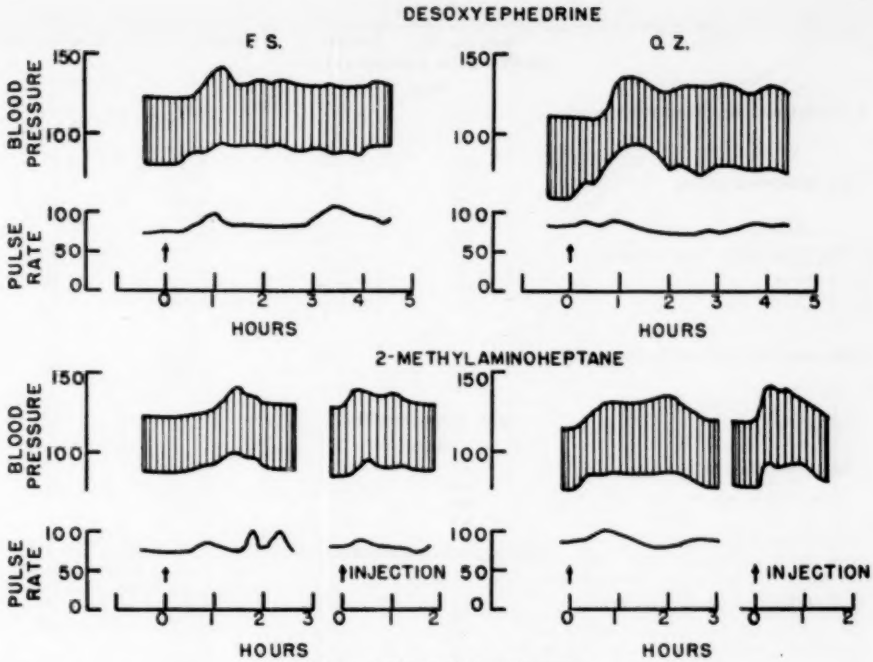



Fig. 1.—Activity of drugs in man.

Systolic and diastolic arterial pressures, in millimeters of mercury. Pulse rate, per minute. Observations in Subject F. S. are to the left, in Subject O. Z. to the right. Both subjects received 50 mg. of desoxyephedrine by mouth. Of 2-methylaminoheptane, Subject F. S. received 200 mg. by mouth and 100 mg. subcutaneously (labeled *Injection*). Subject O. Z. received 300 mg. by mouth and 100 mg. subcutaneously (labeled *Injection*).

was often at 50% of the original increase 30 minutes after the injection of 2-methylaminoheptane.

Intravenous injections of 2-methylaminoheptane subsequent to the first were less effective. This is the phenomenon known as "tachyphylaxis." It was more marked, the shorter the interval between injections. In one instance, an increase of arterial pressure of 76 mm. Hg followed the first injection of 1 mg./Kg. of 2-methylaminoheptane. Four hours later the same dose produced the same increase, but repetition of the dose two hours after this second dose gave an increase of only 54 mm. Hg.

The occurrence of tachyphylaxis interferes with the comparison of 2-methylaminoheptane with desoxyephedrine in the anesthetized dog. In a typical experiment, in which injections were made at hourly intervals, the first injection of 0.5 mg./Kg. of desoxyephedrine gave an increase in arterial pressure of 76 mm. Hg, and the second injection, of 2.5 mg./Kg. of 2-methylaminoheptane, gave an increase of 74 mm. Hg. The third injection, a repetition of the first, gave an increase of 18 mm. Hg, while the fourth, a repetition of the second, gave an increase of 54 mm. Hg. This indicates that 2-methylaminoheptane is about one-fifth as active as desoxyephedrine, but that it is less subject to tachyphylaxis.

**Acute Lethal Toxicity.**—This was determined for oral administration to rats, subcutaneous administration to mice, and intravenous administration to mice and dogs. In several instances, "Tuamine" and desoxyephedrine were studied simultaneously for comparison. The animals were observed for twenty-four hours following the administration. The results are seen in Table I. The phenomena were chiefly convulsive in nature. In the dogs, there were also signs of the sympathomimetic activity of 2-methylaminoheptane, as pallor of mucous membranes and piloerection.

**Chronic Toxicity.**—This was studied in albino rats. They were weaned at thirty days, and at about that time, were divided into groups of four or more, and given either the stock diet, or this diet containing various concentrations of 2-methylaminoheptane mucate. The drug intake was calculated from the observed consumption of food. The results are shown in Figs. 2 and 3. They may be described as follows:

*1.45% Drug.*—Six rats at this concentration lost weight. Two died in eleven days, and one each on the thirteenth, fifteenth, seventeenth, and eighteenth days.

*0.145% Drug.*—Definite interference with growth is seen. One rat died on the seventeenth day. Reproduction was not abolished. The average drug intake over the entire period was 122 mg./Kg. per rat per day.

TABLE I

| Drug | Dose, Mg./Kg. | Solution, % | Mortality Ratio | $LD_{50}$,[a] Mg./Kg. |
|---|---|---|---|---|
| SUBCUTANEOUS ADMINISTRATION | | | | |
| Mice | | | | |
| 2-Methylaminoheptane hydrochloride | 70 | 0.7 | 0/10 | 102 |
| | 75 | 1.0 | 0/10 | |
| | 100 | 1.0 | 4/10 | |
| | 120 | 1.0 | 9/10 | |
| 2-Aminoheptane sulfate | 75 | 1.0 | 0/10 | 100 |
| | 100 | 1.0 | 5/10 | |
| | 117 | 1.0 | 8/10 | |
| | 125 | 1.0 | 10/10 | |
| *r*-Desoxyephedrine hydrochloride | 75 | 1.0 | 3/10 | 79 |
| | 90 | 0.9 | 9/10 | |
| | 100 | 1.0 | 8/10 | |
| | 125 | 1.0 | 10/10 | |
| Rats | | | | |
| 2-Methylaminoheptane hydrochloride | 50 | 2.5 | 3/10 | 60 |
| | 100 | 7.5 | 9/10 | |
| | 200 | 10.0 | 10/10 | |
| ORAL ADMINISTRATION | | | | |
| RATS | | | | |
| 2-Methylaminoheptane hydrochloride | 100 | 10 | 0/5 | 320 |
| | 200 | 10 | 0/10 | |
| | 300 | 10 | 1/10 | |
| | 400 | 10 | 6/6 | |
| INTRAVENOUS ADMINISTRATION | | | | |
| Mice | | | | |
| 2-Methylaminoheptane hydrochloride | 20 | 0.2 | 0/10 | 36 |
| | 30 | 0.3 | 3/10 | |
| | 40 | 0.4 | 8/10 | |
| | 50 | 0.5 | 10/10 | |
| 2-Aminoheptane sulfate | 25 | 0.25 | 1/10 | 35 |
| | 35 | 0.35 | 2/10 | |
| | 50 | 0.50 | 9/9 | |
| *r*-Desoxyephedrine hydrochloride | 30 | 0.30 | 3/10 | 36 |
| | 40 | 0.40 | 8/10 | |
| | 50 | 0.50 | 10/10 | |
| INTRAVENOUS ADMINISTRATION | | | | |
| Dogs | | | | |
| 2-Methylaminoheptane hydrochloride | 10 | 10 | 0/1 | 26 |
| | 25 | 10 | 1/4 | |
| | 50 | 10 | 3/3 | |

[a] $LD_{50}$ was obtained by interpolation on a plot of mortality against dose on logarithmic probability paper.

*0.073% Drug.*—Possibly some interference with growth is seen. The average drug intake was 69 mg./Kg. per rat per day.

*0.029% Drug.*—There is definite impairment of growth. Since this was a group of female rats, while those at 0.073% were male, there may be a sex difference in susceptibility. The average drug intake was 23 mg./Kg. per rat per day.

*0.0145% Drug.*—Neither male nor female rats showed any impairment of growth at this level. The average drug intake was 10 mg./Kg. per rat per day.

**Histological Study.**—At the end of the experimental period, all rats were killed by a blow on the head. Tissues, from stomach, intestines, lung, liver, spleen, kidney, adrenal, heart, ovary, testis, and epididymus, were fixed in formaldehyde, embedded in paraffin, sectioned, and stained with hematoxylin and eosin. The sections were examined by Dr. A. J. Miller, Professor of Pathology. No differences between control and experimental groups were seen.

## DISCUSSION AND SUMMARY

2-Methylaminoheptane is a sympathomimetic agent, active in experimental animals and man, by oral or parenteral administration. Taken by mouth in man, in doses of 200 to 300 mg., it produces a rise in systolic and diastolic arterial pressures, the former increasing by 15 to 20 mm. Hg. The pressures return to normal in about two and one-half hours. The pulse rate may increase or decrease. A comparable increase in arterial pressures can be produced in man with about one-fourth to one-sixth of the dose, if the related drug, desoxyephedrine, is given. The initial rise in pressure is more rapid in the case of desoxyephedrine; the pressure falls to a new level within one and one-half to two hours, but remains elevated

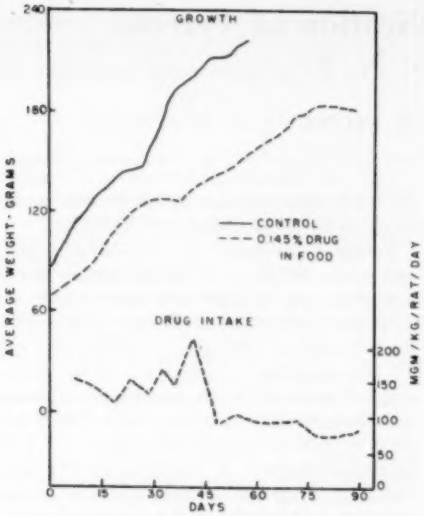



Fig. 2.—Growth and drug intake.
Abscissa is time in days, ordinate is average weight in grams, or drug intake in mg./Kg. per rat per day. The control group consisted of 2 males and 4 females, while the experimental group consisted of 3 of either sex.

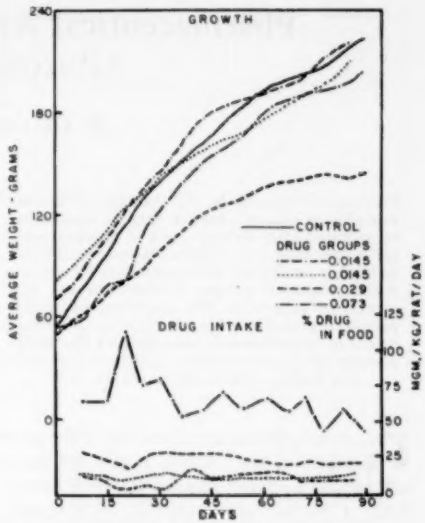



Fig. 3.—Growth and drug intake.
Abscissa is time in days, ordinate is average weight in grams or drug intake in mg./Kg. per rat per day. The control group consisted of 5 male rats, the groups given the 0.0145% diet consisted of 4 males and 4 females, the group given the 0.029% diet consisted of 5 females, and the group given the 0.073% diet consisted of 5 males.

for at least four and one-half hours. Subcutaneous injection of 2-methylaminoheptane causes a change in arterial pressures comparable to the above, in doses one-half to one-third of those given orally. The rise occurs more rapidly, being maximal in ten to twenty minutes, and is briefer in duration, with the pressures returning to normal by one and one-half hours.

Certain side-effects are produced both by 2-methylaminoheptane and desoxyephedrine. Of these, dryness of the nose and mouth is characteristic of sympathomimetic activity. The dizziness, faintness, and feeling of fullness in the head are probably secondary to the circulatory changes. The intense stimulation of the central nervous system, with sleeplessness, seen after ingestion of desoxyephedrine, is completely lacking in the case of 2-methylaminoheptane.

In the anesthetized dog, 2-methylaminoheptane is also about one-fifth as active as desoxyephedrine, as a vasopressor agent. It is of some interest that the aliphatic amine is less subject to tachyphylaxis, but the application of this to man is not apparent, since it has not been demonstrated that tachyphylaxis is of importance in man.

The studies of acute lethal toxicity show that the primary and secondary amines, 2-aminoheptane ("Tuamine") and 2-methylaminoheptane are equally toxic on subcutaneous and intravenous administration. Desoxyephedrine and 2-methylaminoheptane are equally toxic intravenously but the former is more toxic subcutaneously. It is seen that rats and dogs are more susceptible to the toxic action of 2-methylaminoheptane than are mice.

Concerning chronic toxicity, it is seen that the smallest intake at which a deleterious effect was apparent was 23 mg. of base per Kg. body weight per animal per day. It is possible that this is true only of female animals. It is worthy of note that 2-methylaminoheptane produced no visible evidence of tissue damage, even at a level of drug intake at which impairment of growth was quite evident. At a level of drug intake at which there was impairment of growth, reproduction was not abolished.

## REFERENCES

(1) Dale, H. H., and Dixon, W. E., *J. Physiol.*, **39**, 25 (1909); Barger, G., and Dale, H. H., *ibid.*, **41**, 19(1910–1911).
(2) Proetz, A. W., *Ann. Otol., Rhinol. & Laryngol.*, **51**, 112(1942); *Arch. Otolaryngol.*, **37**, 15(1943).
(3) Alles, G. A., *Univ. Calif. Pubs. in Pharmacol.*, **2**, 183 (1946).
(4) Swanson, E. E., and Chen, K. K., *J. Pharmacol.*, **88**, 10(1946).
(5) Jackson, D. E., *J. Lab. Clin. Med.*, **29**, 150(1944).
(6) Ahlquist, R. P., *J. Pharmacol.*, **81**, 235(1944).
(7) Roman-Vega, D. A., and Adriani, J., *Anesthesia & Analgesia*, **23**, 248(1944).
(8) Jackson, D. E., *J. Pharmacol.*, **54**, 152(1935).

# Pharmaceutical Application of Ferrous Gluconate N. F.*

By GEORGE B. STONE

**Ferrous Gluconate N. F., though somewhat unstable in aqueous media, may be readily incorporated into various types of pharmaceutical preparations as a desirable source of iron. Solubility, stability, and compatibility are assured provided proper precautions are observed in regard to *p*H, aeration, additives, processing, and storage conditions. Information and requirements attendant to the preparation of pharmaceutical products containing ferrous gluconate are described.**

THE recent disclosures of the role of the newer members of the vitamin B complex group, such as folic acid and vitamin $B_{12}$, have brought about a further understanding of the blood formation and regeneration processes and greater comprehension of the therapeutic value of iron as a necessary adjunct for administration with these vital factors. These advances have brought about a more profound interest in the type of iron most beneficial for therapeutic administration. One of the most promising sources of iron in medical therapeutics for the treatment of anemias resulting from a loss or deficiency of iron, is ferrous gluconate and the attention it has aroused is confirmed by its admission to the National Formulary VIII (1).

Despite the wide interest in ferrous gluconate for the treatment of iron deficiency, almost no information as regards its solubility, stability, and compatibility is available in the literature to the pharmacist or pharmaceutical chemist upon which to base formulations containing this iron salt. The following paper represents a summary of the pharmaceutical application of ferrous gluconate, the results of an extensive investigation on the employment of ferrous gluconate in the various types of pharmaceutical preparations.

Ferrous gluconate was investigated about 1936 by Nilkantum who was unable to obtain a crystalline compound (2). It was later prepared and clinically evaluated in anemia by Reznikoff and Goebel in 1937 (3). The commercial manufacture of ferrous gluconate followed closely thereafter, but large-scale production, however, was delayed by the advent of World War II and it has been only since the end of the war that ferrous gluconate has become readily available to the pharmaceutical industry.

Ferrous Gluconate N. F., $Fe(C_6H_{11}O_7)\cdot 2H_2O$, mol. wt. —482.18, is the normal ferrous salt of *d*-gluconic acid, a sugar acid derived from the oxidation of the sugar, *d*-glucose. It is a dihydrate crystal containing 11.5 per cent iron and 7.5 per cent water of hydration. It occurs as a fine, yellowish gray or pale greenish yellow powder with a slight odor resembling burned sugar and with a moderate ferruginous taste (1). It is reasonably stable in air, but is affected by light. Oxidation is hastened by exposure to air of high humidity. Upon heating it becomes anhydrous above 105°, with a slight amount of decomposition.

There has been a marked difference of opinion as to what form of iron is most efficacious for human administration. Up to the present time it appears that the most valuable form of iron for oral administration is a soluble and readily ionized salt in which the cation is iron. It has also been demonstrated that iron in the reduced form as in ferrous salts is better utilized than in ferric iron salts. The usual ferric salts appear to require two to three times as much as ferrous salts for equivalent therapeutic effect (4). In addition to possessing these requisite properties, ferrous gluconate has a number of further advantages which have led to its increasing use in iron therapy. The mild, atoxic, readily assimilated gluconic acid formed upon hydrolysis of ferrous gluconate *in vivo* produces less gastrointestinal disturbance and it has been reported that individuals who cannot tolerate ferrous sulfate orally, can assimilate ferrous gluconate without untoward reactions such as nausea, gastric disturbance, etc. (5, 6). Ferrous gluconate is often administered to patients who are unable to tolerate other forms of iron (4, 7). Ferrous gluconate, furthermore, does not readily precipitate protein and is therefore administered with very little local or systemic irritation (3, 8, 9). Clinical investigation has shown that the iron in ferrous gluconate is more efficiently absorbed and utilized *in vivo* for the formation or regeneration of red blood corpuscles than the iron in other salts (8). It produces a very satisfactory reticulocytic response and increases the

* Received July 16, 1949, from the Technical Service Department, Chas. Pfizer & Co., Inc., Brooklyn, N. Y.

red blood count to normal in a reasonably short period of time because of its high availability and utilization in the human system (8).

## LIQUID PREPARATIONS

**Aqueous Solutions.**—The stability of ferrous gluconate in the solid form is relatively high, but in aqueous solution it is somewhat less stable. It is quite sensitive to oxidation through the action of atmospheric oxygen by which reaction the ferrous form of the iron is altered to the ferric state (10). The rate of transformation is a function of the solution *p*H, temperature, aeration, and the presence of other substances, particularly oxidizing or reducing agents. The color of ferrous gluconate solutions is determined by the concentration which varies the intensity of the color, and the *p*H, which produces light yellow solutions at *p*H 2.0, changing to brown at *p*H 4.5, and becoming green above *p*H 7.0. Oxidation causes a darkening of the color of ferrous gluconate solutions. Through a photochemical reaction upon exposure to light, ferrous gluconate solutions are also oxidized, but in this case oxidation results in a decolorizing, rather than a darkening action, generally with the formation of a precipitate, and with the production of a ferric compound of unknown composition (10).

The solubility of ferrous gluconate in water increases proportionally with an increase in temperature as is indicated in Fig. 1. At normal temperatures the solubility is about 8.0–10.0 Gm./100 ml. solution, but because this substance often forms rather stable supersaturated solutions, the solubility will vary within certain limits. The addition of most common salts decreases the solubility of ferrous gluconate, but the normal solubility is increased by the addition of the citrate ion in the form of the acid or a salt, as indicated in Fig. 2, upon the addition of sodium citrate U. S. P. This solubility increase is apparently due to the formation of a soluble stable complex salt with the citrate ion.

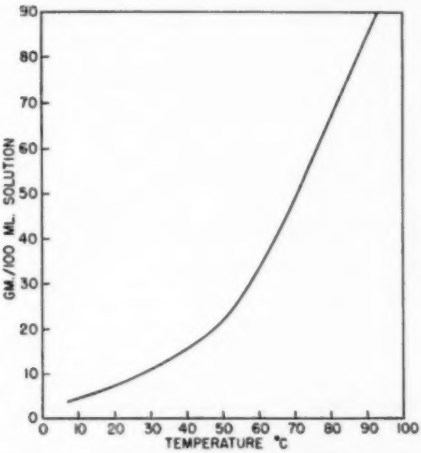



Fig. 1.—Solubility in water of Ferrous Gluconate N. F. with temperature.

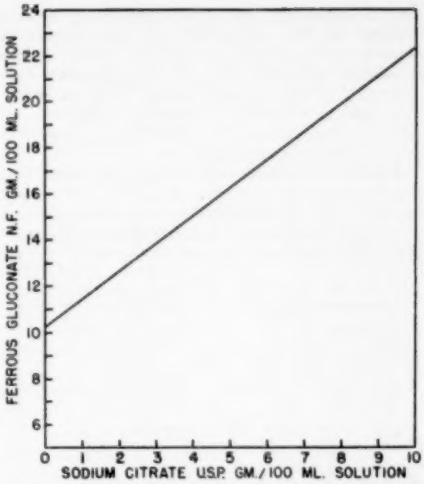



Fig. 2.—Solubilizing effect of Sodium Citrate U. S. P. on Ferrous Gluconate N. F. in aqueous solution at 28°.

The relative stability of ferrous gluconate solutions toward atmospheric oxidation at various *p*H's under accelerated conditions is shown in Fig. 3. From this graph it may be seen that ferrous gluconate solutions are much more rapidly oxidized at neutral *p*H than in the acid range. A ferrous gluconate solution at *p*H 7.0 is oxidized almost eight times more rapidly than a solution at *p*H 2.0. The addition of ascorbic acid, a reducing agent, initially decelerates the rate of oxidation of ferrous gluconate but, in so protecting the ferrous gluconate, is itself rapidly destroyed. This is due to the formation of ferric ascorbate which is quite unstable and is readily decomposed. After a portion of the ascorbic

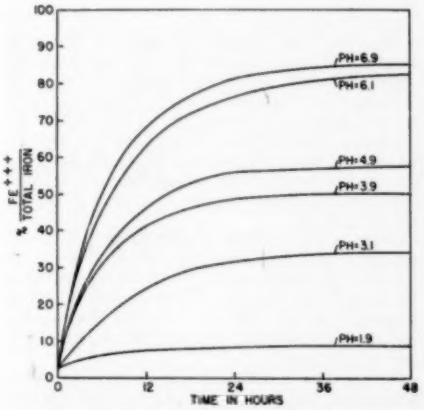



Fig. 3.—Rate of oxidation of 5% *w/v* Ferrous Gluconate solutions at various *p*H under accelerated conditions. Aspiration with 400 cc. air/minute at 28°.

acid is destroyed the ferrous gluconate becomes oxidized so that ultimately the same degree of oxidation to the ferric iron results. The addition of ascorbic acid soon darkens ferrous gluconate solutions due to the formation of the ferric ascorbate, a red-colored salt which demonstrates a high tinctorial value. Such color formation may be objectionable in certain formulations.

**Elixirs.**—Hematinic elixirs are commonly prepared by the use of various proportions of alcohol, propylene glycol, or glycerin in water. The addition of solvents tends to decrease the solubility of ferrous gluconate as is shown in Fig. 4. However, it may

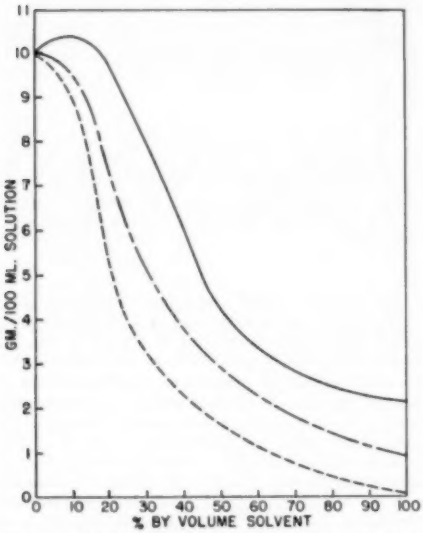



Fig. 4.—Solubility of Ferrous Gluconate N. F. in aqueous solvent mixtures at 28°.
—— Glycerin U. S. P.; — — — Propylene Glycol N. F.; - - - Ethanol.

be seen that the decrease in solubility of ferrous gluconate is less with the solvent containing the greatest number of hydroxyl groups—in this case glycerin. Thus ferrous gluconate is more soluble in aqueous glycerin mixtures than in aqueous alcohol solutions. The addition of such solvents does not appreciably affect the oxidation of the ferrous gluconate, and in fact glycerin retards the conversion to ferric iron to a greater degree than ethanol as indicated by Fig. 5.

**Syrups.**—The addition of sucrose or glucose also proportionately decreases the solubility of ferrous gluconate in aqueous media, as shown in Fig. 6. A higher solubility is found in dextrose than in sucrose solutions, but the difference is not appreciable. The slight solubilizing action of dilute sugar solutions is to be noted.

The stability of ferrous gluconate in simple syrup formulations does not vary markedly with the type of sugar. The use of glucose, a reducing sugar, does not significantly retard the oxidation of the ferrous gluconate in solution as compared with the use of sucrose syrups.

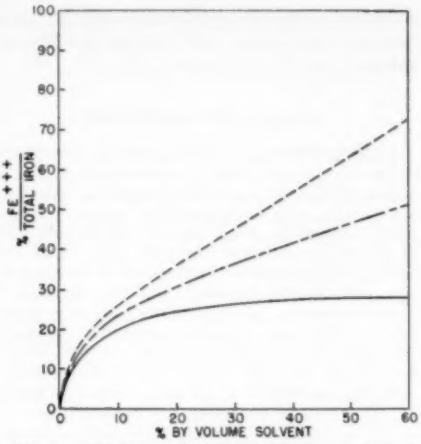



Fig. 5.—Oxidation of Ferrous Gluconate N. F. in aqueous solvent mixtures after ninety-six hours at 28°. Solutions saturated with Ferrous Gluconate N. F. —— Glycerin U. S. P.; — — — Propylene Glycol N. F.; - - - Ethanol.

**Additives.**—Sherry wine is very often employed in hematinic formulations. Unless the wine is detanninated, an incompatibility will result, due to the interaction of the iron in ferrous gluconate and the tannin, which will result in precipitation. Liver extract, rice, and malt bran extracts are often used as a source of the vitamin B complex factors. For the most part such natural extracts are compatible with ferrous gluconate. Occasionally, however, such extracts demonstrate an incompatibility with ferrous gluconate solutions due, apparently, to the presence of certain proteins which are precipitated in the presence of the iron. Such conditions, however, are infrequent. The synthetic crystalline

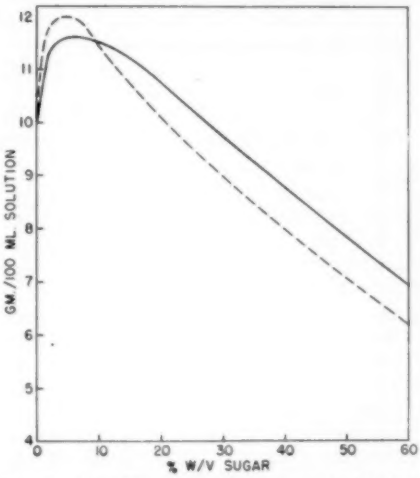



Fig. 6.—Solubility of Ferrous Gluconate N. F. in aqueous sugar solutions at 28°.
——Dextrose U. S. P.; - - - - Sucrose.

members of the vitamin B complex are compatible with ferrous gluconate with the exception of pyridoxine which may react with the iron with the formation of a green coloration. Usually the color production is unnoticeable except in light-colored or very concentrated formulations.

The use of vitamin C, ascorbic acid, in liquid ferrous gluconate preparations is generally contraindicated, not only because of the production of an undesirable dark coloration, but also because the addition does not appreciably retard the oxidation of ferrous gluconate, except for very limited periods of storage. Aminoacetic acid, glycine, also produces a darkening of ferrous gluconate solutions by the formation of ferric glycinate, a red-colored salt with a high tinctorial value.

Liquid ferrous gluconate preparations should be buffered in a *p*H range from 3.5 to 4.5 to increase stability. The use of citric acid–sodium citrate buffer for this adjustment of *p*H is most worth while, because of the apparent specific stabilizing action of the citrate ion. Caution should be observed with the admixture of natural vitamin B complex extracts that the *p*H is not adjusted so low that proteinaceous materials in the extracts become coagulated and precipitate. The lower the *p*H, of course, the less oxidation of the ferrous gluconate that will occur.

Although the solubility of ferrous gluconate is reduced by the addition of the various solvents employed in liquid pharmaceutical preparations, the solubility remains such that it is possible to obtain a therapeutic dosage of iron and still maintain a sufficient margin of safety against precipitation or supersaturation. Inasmuch as vigorous mixing or agitation, as well as an increase in temperature, will promote oxidation, such conditions should be avoided as much as possible during processing of liquid preparations for oral use. Excessive exposure to light during processing and storage should be prevented to avoid decolorization with a concomitant formation of a precipitate.

**Ampuls.**—The subject of the need for the parenteral administration of iron is a controversial question among the members of the medical profession. While there has been little agreement as to the necessity for this route of administration, there has been relative concurrence that if parenteral iron therapy is employed, the form of iron to be injected should be ferrous gluconate (9, 11). It has been reported that the intramuscular injection of ferrous gluconate results in no systemic, and only rare and mild local irritation and that such treatment causes no more pain than any other medicament introduced intramuscularly (3, 7, 8).

The preparation of sterile aqueous ferrous gluconate solutions, which will be chemically and physically stable, may be accomplished under processing conditions of only a very exacting and painstaking nature. The ease of oxidation and heat lability of ferrous gluconate in aqueous solution requires special methods and proper precautions in order to achieve successful results.

Aqueous solutions of a concentration up to 5% ferrous gluconate contain a concentration of iron up to 5 mg./ml. of solution. In preparing such solutions the concentration of ferrous gluconate will depend upon the use for which it is intended and the presence of other additives, such as the natural B complex extracts or the synthetic vitamin members, as, for example, thiamine. It is to be noted that iron solutions of all kinds produce some pain upon injection—even though the pain resulting from ferrous gluconate is less than with other iron salts—and that the degree of irritation upon injection is a function of the concentration of the iron, as well as the *p*H of the solution. Thus, the selection of concentration must be based on these considerations (12).

In the process of preparation of such solutions the desired amount of ferrous gluconate is added to somewhat less than the calculated quantity of distilled water, with the application of a minimum amount of heat, preferably less than a temperature of 60°. The *p*H of the solution is adjusted to a value between 3.5 and 4.5 by the use of citric acid and sodium citrate. The amount of buffer required under optimum conditions is almost equivalent amounts by weight of anhydrous citric acid and sodium citrate U.S.P., the sum total by weight of which will be nearly equal to one-fifteenth to one-fifth, but preferably one-tenth the weight of ferrous gluconate. The solution is then made up to volume. If the preparation thus far can be carried out in an inert atmosphere, for example, nitrogen or carbon dioxide, the resulting solution will be considerably lighter in color and will contain smaller amounts of ferric iron (10). Reducing aeration by limited agitation and minimal application of heat will also result in lighter-colored solutions.

Sterilization should be accomplished by bacterial filtration through a suitable filtering medium of fine porosity, but can also be carried out after filling and sealing by fractional heat treatment or Tyndallization at 60–70°. The filtration, filling, and sealing operations should be carried out in an atmosphere of nitrogen or carbon dioxide. Replacement of the air in the headspace before sealing with nitrogen or carbon dioxide is essential for stability, otherwise during prolonged storage the ferrous gluconate will be oxidized by the oxygen component of the air in the headspace and precipitation will ensue.

Ampul solutions should be protected from exposure to light because deterioration resulting in possible precipitation and decolorization will occur. Ampul solutions prepared in this manner have been found to be chemically and physically stable for a period of at least a year under normal storage conditions. Formation of a precipitate, darkening or fading, were not observed. Oxidation to form ferric iron was not appreciable. Chemical assay for the presence of a number of possible decomposition products was negative and indicated little chemical change in the ampuls during the storage period.

The degree of color of sterile ferrous gluconate solutions is a function of the concentration, *p*H, and the degree of oxidation during processing. Such solutions may be decolorized before filtration and filling by several methods, if such a course of action appears desirable. The method of Demers, which consists of a reduction during heat sterilization by the use of alkaline dextrose temporarily buffered with lactic acid and sodium hydroxide, is applicable, but is limited to solutions of a concentration of 1% ferrous gluconate or less (12). The reduction of ferrous gluconate solutions with hydrogen gas and a palladium on charcoal catalyst is most applicable. By this method a considerable reduction in the color

of ferrous gluconate solutions can be obtained. The interaction of gluconic acid in the form of its lactone and reduced iron for the production of nascent hydrogen will cause a reduction of color, but the method is not as efficient as the use of gaseous hydrogen with a palladium catalyst.

The use of various additives may be desirable in parenteral ferrous gluconate solutions. Such natural extracts as liver extracts will be compatible within reasonable limits of concentration. The synthetic members of the vitamin B complex are also compatible with the possible exception of pyridoxine in larger concentrations, and with the possible exception of some of the newer members of the vitamin B complex as yet not fully investigated. The addition of ascorbic acid is contraindicated. Normal saline or physiological dextrose does not affect stability to any extent and their addition is discretionary.

## SOLID PREPARATIONS

**Tablets and Capsules.**—The light fluffy nature of ferrous gluconate, which results in a large apparent volume and a low density, presents certain difficulties in the manufacture of tablets and in the preparation of capsules, particularly if the ferrous gluconate is present in the formulation in relatively large proportions. For tablet work it is almost always necessary to employ the procedure of granulation in order to obtain granules of a uniform particle size which will be handled advantageously by the tableting machine and contain a moderate amount of fine particles for yielding a satisfactory appearance.

Dry granulation or "slugging" is applicable to ferrous gluconate when the formulation contains only small amounts of this material and is necessary when materials that are incompatible with ferrous gluconate are present in the formulation. Wet granulation methods can be employed for ferrous gluconate formulations with the use of water or alcohol as the excipient. When water is employed caution must be observed to prevent oxidation of the ferrous iron to ferric iron and it is essential that the material be dried thoroughly to reduce the moisture content before regranulation. Under optimum conditions the proportional increase in the ferric iron content is less than 25%.

Any of the common diluents may be employed in ferrous gluconate tablets. However, because of the greater stability of ferrous gluconate under acid conditions, the use of lactose or the various types of starch are preferable to the use of calcium phosphates, calcium carbonate and sodium bicarbonate. The various natural gums such as acacia, or sugars such as sucrose and dextrose, may be employed as binders. Dextrose may be somewhat better because of its reducing nature which may tend to preserve the iron in the ferrous form. The usual lubricants such as talc, stearate salts, and natural oils, fats, or waxes are compatible.

The natural sources of the vitamin B complex such as dried rice and malt bran extracts and dried liver extract are compatible with ferrous gluconate in products of this type, when moisture content is low, as are the synthetic members of the vitamin B complex. Vitamin C, ascorbic acid, if properly handled and if the moisture content of the final product is limited, can be added to such preparations and may, because of the strong reducing action, tend to stabilize the ferrous gluconate in the reduced form.

For capsule work it is often necessary to granulate ferrous gluconate formulations in order that filling machines will operate correctly and even with granulation it may be necessary to employ special feeding devices. Generally speaking, ferrous gluconate tablets and capsules, when properly prepared and having a low moisture content, are very stable toward oxidation. After a normal storage period of a year the increase in the ferric iron content over the initial value should not be greater than 50%.

**Saccharated Ferrous Gluconate.**—For oral administration it may be desirable to ameliorate the ferruginous taste of ferrous gluconate to make it more palatable. This can be accomplished by saccharating the material with sucrose solutions or with a mixture of sucrose and glucose syrups in a manner similar to the preparation of Saccharated Ferrous Carbonate N. F. In this procedure the desired amount of ferrous gluconate is mixed with syrup to give a thick paste, which upon thorough mixing is evaporated to dryness. This resulting mass is then granulated or powdered and may, with suitable treatment, be prepared into tablets or capsules. This treatment effectively reduces the ferruginous taste of ferrous gluconate and makes it more palatable. In the process of preparation, the ferric iron content increases about 25% under normal conditions and yields a mixture which is a free-flowing, light tan powder. It is somewhat hygroscopic, however, and must be protected from exposure to air.

## SUMMARY

1. The solubility, stability, and compatibility of ferrous gluconate in aqueous pharmaceutical solutions, elixirs, and syrups has been described.

2. Processing requirements, stability, and compatability of sterile ferrous gluconate solutions for parenteral administration have been indicated.

3. Techniques for incorporation of ferrous gluconate into tablets and capsules have been outlined.

4. Saccharating procedures for preparing a more palatable ferrous gluconate have been described.

## REFERENCES

(1) "National Formulary," ed. 8, Mack Printing Co., Easton, Pa., 1946, p. 225.
(2) Nilkantum, S. V., *J. Sci. Technol. India*, **2**, 39(1936).
(3) Reznikoff, P., and Goebel, W. F., *J. Pharmacol. Exptl. Therap.*, **59**, 182(1937).
(4) Teeter, E. J., *J. Am. Med. Assoc.*, **127**, 973(1945).
(5) Reznikoff, Paul, *Med. Clinics N. Amer.*, **28**, 368 (1944).
(6) Wintrobe, M. M., "Clinical Hematology," Lea and Febiger, Philadelphia, 1946, 339 pp.
(7) Green, M. W., *J. Am. Pharm. Assoc., Pract. Pharm. Ed.*, **7**, 56(1945).
(8) Reznikoff, P., and Goebel, W. F., *J. Clin. Invest.*, **16**, 547(1937).
(9) Lehman, A. J., *Modern Hosp.*, **65**, 106(1945).
(10) Neiger, R., and Neuschul, P., *Z. physik. Chem.*, **A177**, 335(1936).
(11) Musser, J. H., "Internal Medicine," Lea and Febiger, Philadelphia, 1945, 992 pp.
(12) Demers, J. U., "Étude sur la preparation et la sterilisation de solutes injectables," Charrier and Dugal, Ltd., Quebec, 1942, 153 pp.

# Effect of Buffering Agents on Absorption of Acetysalicylic Acid*,†

By W. D. PAUL, R. L. DRYER, and J. I. ROUTH

**A buffer system composed of aluminum dihydroxyaminoacetate and magnesium carbonate is described. This buffer system, when administered with acetylsalicylic acid, reduces gastrointestinal distress in man and gastric damage in Shay rats. It also increases at least twofold the rate of absorption of salicylates from the gastrointestinal tract.**

DISTURBANCES of the gastrointestinal tract following salicylate medication have been reported frequently (1–4). Those that result from acetylsalicylic acid are reported to produce less serious manifestations than those that result from salicylic acid or its sodium salt (5–7). The nausea and vomiting which follow large doses of salicylates are probably of central origin (8, 9), while smaller single doses produce local gastric irritation (10). Many attempts have been made to reduce the gastric effects, notably by the use of enteric coatings, added buffer agents, or by the use of slowly hydrolyzable salicylate salts. Most of these methods are objectionable since the rate of absorption, as measured by blood salicylate levels, is not constant. The present study was undertaken to find a suitable buffering agent for salicylates which would minimize the gastric irritation and still permit rapid absorption.

## HISTORY

Barbour and Dickerson (11) observed irritation and ulceration of the stomach in rats after acetylsalicylic acid was given either orally or subcutaneously. By direct gastroscopy Douthwaite and Lintott (10) reported similar observations in the human. These findings could not be confirmed in this laboratory. Paul (12) observed a series of 112 subjects given a single 1-Gm. dose of acetylsalicylic acid and found no edema, hemorrhage, or hyperemia of the gastric mucosa. Similar findings have been reported by Caravati (13) and Caravati and Crosgrove (14), who examined twelve subjects with a high intake of sodium salicylate. They found that even though nausea and vomiting were evidenced, endoscopic examination revealed a normal mucosa in all cases.

Reduction or prevention of gastrointestinal disturbances arising from salicylate ingestion has been attempted in a number of ways. Slightly soluble and slowly hydrolyzed salts, such as the calcium salt, have been used (4, 10). Simon (15) attempted to lower gastric acidity by giving magnesium oxide with either salicylic acid or aspirin, and claimed prevention of untoward effects by these combinations. Other workers (9, 11, 16, 17) have advocated the use of calcium gluconate. While their results show definite relief from gastric irritation when calcium gluconate is given with acetylsalicylic acid, observations differ on the degree of such relief. Sodium bicarbonate has been employed in a similar manner (9, 11, 13, 16), but again there is considerable disagreement as to its efficacy. Clark and Adams (18) have studied the effects of some of these antacids alone on gastric secretion, and have shown that sodium bicarbonate, calcium carbonate, and magnesium oxide all increase the volume and acidity of the gastric secretion. In another study (19) they demonstrated that acetylsalicylic acid in doses of 70 to 95 mg./Kg. did not stimulate gastric secretion, but that twice this amount increased both volume and acid production. This latter finding confirmed observations of Schnedorf, *et al.* (16).

In addition to the gastrointestinal disturbances, administration of salicylates without buffering reportedly produces certain effects on the acid-base balance of the blood. According to Graham and Parker (20), the hyperpnea observed following salicylate therapy is due to a direct effect of salicylates on vagal afferent fibers in various locations. Fashena and Walker (21) described a metabolic acidosis in children receiving aspirin. Rapoport and Guest (22) found a respiratory alkalosis in both children and animals. As pointed out by Erganian, *et al.* (23), these results are somewhat equivocal, since they deal, on one hand, with anoretic growing children and, on the other, with adults whose caloric and fluid intake was relatively undisturbed. Farber, Yiengst, and Shock (24) also describe what they term a primary respiratory alkalosis following 12 Gm. of aspirin given over a period of nine hours. In our opinion this is the result of the vagal effects described earlier by Graham and Parker.

Recently Krantz and co-workers (25) developed and described a new antacid drug, aluminum dihydroxyaminoacetate (ADA), which upon acid hydrolysis yields glycine and aluminum hydroxide. Both glycine and aluminum hydroxide are very efficient buffers. *In vitro* measurements in this laboratory showed that a mixture of ADA and magnesium carbonate was a better buffer system than either substance alone, and that the buffering action was not only dependent on the quantity but also on the ratio of the two substances in the buffer mixture.

## EXPERIMENTAL

Since the various salicylate adjuvants which had been proposed up to this time were not completely satisfactory, an investigation was made of the use of mixtures of ADA and magnesium carbonate with reference to the gastric symptoms after salicylate therapy by several experimental techniques.

* Received May 7, 1949, from the Departments of Internal Medicine and Biochemistry, College of Medicine, State University of Iowa, Iowa City.
† Aided by a grant from Bristol Myers Co., New York.

The first experiment was to determine the relative buffering ability of the several mixtures of ADA and magnesium carbonate. Samples of the mixtures were added to 100 ml. of 0.01 *N* HCl. The hydrogen-ion concentrations were determined with a glass electrode at temperatures of 37 ± 1°. The initial *p*H was 2.0. After addition of the antacid mixture, the solutions were continuously stirred with an air stirrer and the *p*H was measured at definite time intervals as in Fig. 1. Neither 1 grain (64.5 mg.) of magnesium carbonate nor 2 grains (129 mg.) of ADA alone proved capable of neutralizing the acid sample within thirty minutes. Mixtures of ADA and magnesium carbonate were much more efficient in greater than additive degree.

Figure 1 is a graph of the *p*H-time curves obtained in our preliminary study of the ADA-magnesium carbonate buffer system. These curves can be readily divided into two groups, one which gave a considerable change in *p*H, the second which gave a much smaller change in *p*H. These curves led to the conclusion that the ratio of ADA to magnesium carbonate was an important factor in the buffer efficiency. The three mixtures, H, F, and A (see Fig. 1), are nearly the same in effect. From the shape of all the curves, we also reached the conclusion that the kinetics of the system are such that the magnesium carbonate effect is realized very rapidly, but that the later effect of the ADA successfully raises the *p*H far more than the addition of a mole equivalent weight of carbonate. Tablets containing these quantities of buffers (H, F, and A) and 5 grains of acetylsalicyclic acid were made up. Acid-binding capacity was investigated by adding dilute acid until a sensibly constant final *p*H was obtained.

The results (Table I) show that acetylsalicylic acid lowered the initial *p*H from between 8.4 and 9.1 to one between 3.7 and 5.7 yet did not greatly influence the acid-binding capacity of the mixture. Analysis of these data led us to choose both the 1:2 and the 3:4 ratio buffers (H and F) for all subsequent work. The initial *p*H of these buffered aspirin mixtures is just within the optimal range for absorption of salicylate in Thiery-Vella dogs as found by Ligon, *et al.* (26).

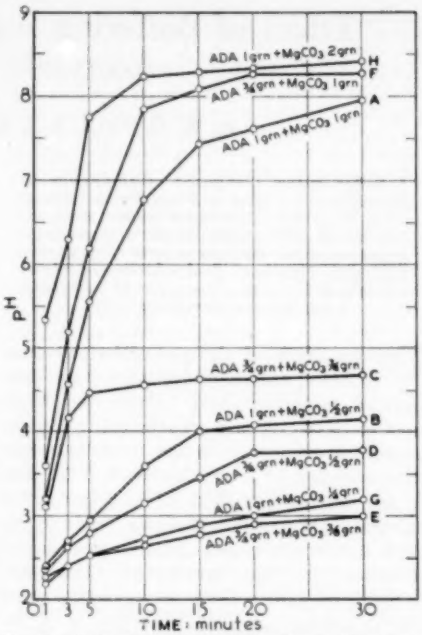



Fig. 1.—Buffering capacity of aluminum dihydroxyaminoacetate magnesium carbonate mixtures.

A final experiment was performed to study the effect of acetylsalicylic acid on the gastric mucosa of rats with ligated pylorus. The procedure was a modification of that developed by Shay, *et al.* (27). The prepared animals were given $2^1/_2$ grains of aspirin and 4 grains of ADA, while the controls received saline. Assay was based on measurements of volume of secretion, acid production, and absence or presence of areas of distinct ulceration. These results are summarized in Table II.

TABLE I.—ACID-BINDING CAPACITY

| | Initial *p*H | Final *p*H | Acid-Binding Capacity |
|---|---|---|---|
| | Buffer | | |
| 1 grain ADA + 2 grains $MgCO_3$ (H) | 8.46 | 2.37 | 53.0 cc. 0.01 *N* HCl |
| $^3/_4$ grain ADA + 1 grain $MgCO_3$ (F) | 9.10 | 2.52 | 31.7 |
| 1 grain ADA + 1 grain $MgCO_3$ (A) | 8.53 | 2.32 | 37.8 |
| | Buffer Plus Acetylsalicylic Acid | | |
| ADA (1 gr.), $MgCO_3$ (2 gr.), ASA (5 gr.) | 5.76 | 2.48 | 46.0 |
| ADA ($^3/_4$ gr.), $MgCO_3$ (1 gr.), ASA (5 gr.) | 4.13 | 2.45 | 34.1 |
| ADA (1 gr.), $MgCO_3$ (1 gr.), ASA (5 gr.) | 3.76 | 2.40 | 29.0 |

TABLE II.—AVERAGE EFFECTS OF BUFFERED ASPIRIN IN THE SHAY RAT

| Treatment | No. Animals | Rate of Secretion, Ml./100 Gm./Hr. | Free Acid, M. Equiv. | Total Acid, HCl/100 Ml. | *p*H |
|---|---|---|---|---|---|
| 2 ml. saline | 29 | 0.44 | 31.4 | 74.9 | 2.2 |
| 2 ml. saline plus 2.5 grains buffered ASA | 30 | 0.33 | 0.0 | 74.5 | 4.0 |

| "Ulcer Index"[a] | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 29 controls | 1 | 3 | 3 | 3 | 16 | 3 |
| 30 experiments | 17 | 6 | 5 | 1 | 1 | .. |

[a] See reference (25). 0 and 1 are not real ulcers, 2–5 are ulcers of increasing severity. This is an arbitrary index.

The work of Shay has established the utility and validity of the pyloric ligation technique as a unique assay of the effectiveness of various antacid and antiulcer agents. A complete detailed investigation of the effects of aspirin studied in this manner has been published elsewhere (28). We have checked the findings of Pauls, Wick, and MacKay (29) that acetylsalicylic acid, like salicylic acid, has a potent antiulcer effect in these prepared animals. In the dosage range employed here, aspirin lowered free acidity, rate of secretion, and incidence of ulceration. This effect was greater when buffered aspirin was employed, in spite of the fact that Shay and his coworkers (30) report ADA alone to be less effective than aluminum hydroxide or sodium dodecyl sulfate. This was not verified by Katz (31), who found that in adequate dosage ADA gave equivalent or better protection than sodium dodecyl sulfate.

The clinical study of buffered aspirin was directed toward two objectives, the first to determine the effect of buffering on the incidence of gastric intolerance, and the second, its influence on the effective utilization of salicylate. In study of the first point, 238 subjects were selected at random from the medical wards. These subjects included members of the hospital staff and patients with disorders ranging from cardiac failure to psychoneurosis. The ages ranged from 16 to 80, and the sex distribution was about even. Each was given two tablets of the buffered aspirin (10 grains acetylsalicylic acid). None knew what he was taking or the purpose of the experiment. At the end of one hour, and after one day each subject was asked whether he had experienced any distress from the tablet and what, if any, its action had been. The survey was made as nonsuggestive and unbiased as possible. Of the 238 patients only one encountered gastric distress after taking buffered aspirin. Subsequent inquiry of these same patients revealed that 22 had experienced gastric distress (described as heartburn, nausea, and vomiting) after taking ordinary aspirin. Of the subjects who presented a history of intolerance to aspirin, many were previously or subsequently observed after administration of U. S. P. aspirin. There was evident distress with plain aspirin but only one was inconvenienced by the test dose of buffered aspirin. This study is briefly tabulated in Table III.

TABLE III.—GASTRIC DISTRESS DUE TO 10 GRAINS ASPIRIN

| | |
|---|---|
| Total subjects receiving buffered aspirin | 238 |
| Subjects with previous history of distress due to aspirin | 22 |
| Subjects showing distress due to buffered aspirin | 1 |

The second part of the clinical study was designed to ascertain the influence of buffering on the absorption of ingested salicylate. Absorption was indicated by the blood concentration of salicylate, measured according to Brodie, *et al.* (32). Forty-seven patients were given 10 grains of nonbuffered U. S. P. aspirin and salicylate levels were determined on blood samples taken just before, ten minutes and twenty minutes after ingestion of the drug.

To a second series of patients we administered an equivalent dose of buffered aspirin. Similar blood samples were assayed as before. No patient was used in either study if his initial (0 minute time)

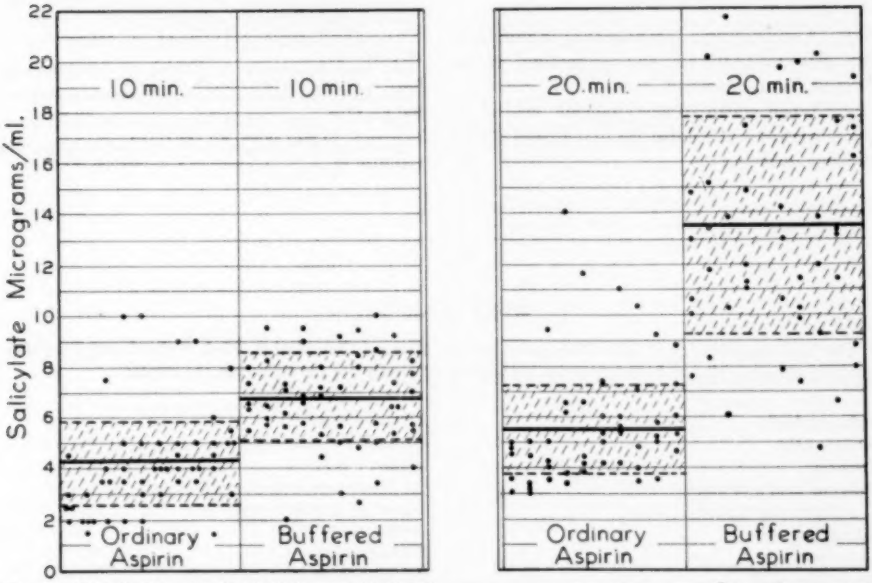



Fig. 2.—Distribution of individual plasma salicylate levels; ——— = mean, - - - = 1 sigma from mean.[1]

[1] Quantitative significance of difference between two means. $\frac{X}{\text{Sigma}}$ = 7.25 (10 min.) and 12.2 (20 min.)

blood sample showed any residual salicylate from previous therapy.

The results of these studies are given in Table IV.

TABLE IV.—BLOOD SALICYLATE LEVELS, MICROGRAMS/CC. PLASMA (AVERAGE)[a], 47 SUBJECTS

| Time, Min. After Ingestion | 10 Grains U. S. P. Aspirin | 10 Grains Buffered Aspirin |
|---|---|---|
| 0 | 0.0 | 0.0 |
| 10 | 3.9 | 6.6 |
| 20 | 5.2 | 12.8 |

[a] The statistical significance of these averages have been confirmed by the method of Pearl (33).

The data in Table IV demonstrate that the addition of an ADA-magnesium carbonate buffer of proper proportion to ordinary aspirin results in at least a twofold increase in blood salicylate levels. The ten-minute salicylate level following buffered aspirin, for example, exceeds the twenty-minute salicylate level for ordinary aspirin by more than 20%. Furthermore, the salicylate level twenty minutes after ingestion of buffered aspirin is almost $2^1/_2$ times the twenty-minute ordinary aspirin level. Figure 2 expresses these facts graphically. The mean of the distribution of individual salicylate levels is indicated by the heavy solid line. The shaded areas indicate the range of values which fall within one sigma of the mean. The validity of this separation of the means is expressed by the values of $x$/sigma (the quantitative significance of the difference between two means). These higher levels, obtained in shorter time, provide more rapid application of the analgesic, antipyretic, and antirheumatic effects of acetylsalicylic acid than has been possible previously.

## SUMMARY

1. A new buffer system consisting of aluminum dihydroxyaminoacetate and magnesium carbonate has been described.

2. When added to acetylsalicylic acid it reduces gastrointestinal distress in man and gastric damage in Shay rats.

3. It also increases the rate of absorption of salicylate from the gastrointestinal tract at least twofold.

## REFERENCES

(1) Chistoni, A., and Laprena, F., *Arch. farmacol. sper.*, **8**, 63(1909).
(2) Dodd, K., Minat, A. S., and Arena, J. M., *Am. J. Diseases Children*, **53**, 1435(1937).
(3) Bumcchi, L., *Rass. fisiopatol clin. e terap. Pis.*, **10**, 301(1938).
(4) Stutzman, J. W., Orth, O. S., and Mellish, C. H., *J. Pharmacol. Exptl. Therap.*, **73**, 420(1941).
(5) Gazert, *Deut. Arch. klin. Med.*, **68**, 142(1900).
(6) Gorges, *Berlin klin. Wochschr.*, **39**, 753(1902).
(7) Roch, M., *Bull. gen. therap.*, Paris, **163**, 218(1912).
(8) Eggleston, C., and Hatcher, R. A., *J. Pharmacol. Exptl. Therap.*, **7**, 225(1915).
(9) Thompson, H. E., and Dragstedt, C. A., *Arch. Int. Med.*, **54**, 308(1934).
(10) Douthwaite, A. H., and Lintott, G. A., *Lancet*, **235**, 1222(1938).
(11) Barbour, H. G., and Dickerson, C., *Arch. intern. pharmacodynamie*, **58**, 78(1938).
(12) Paul, W. D., *J. Iowa State Med. Soc.*, **33**, 155(1943).
(13) Caravati, C. M., *Gastroenterology*, **6**, 7(1946).
(14) Caravati, C. M., and Crosgrove, E. F., *Arch. Internal Med.*, **24**, 638(1946).
(15) Simon, F. A., *J. Lab. Clin. Med.*, **16**, 1064(1931).
(16) Schnedorf, J. G., Bradley, W. B., and Ivy, A. C., *Am. J. Digestive Diseases*, **3**, 239(1936).
(17) Barbour, H. G., and Porter, J. A., *J. Pharmacol. Exptl. Therap.*, **60**, 224(1937).
(18) Clark, B. B., and Adams, W. L., *Gastroenterology*, **9**, 284(1947).
(19) Clark, B. B., and Adams, W. L., *ibid.*, **9**, 461(1947).
(20) Graham, J. D. P., and Parker, W. A., *Quart. J. Med.*, **17**, 153(1948).
(21) Fashena, G. J., and Walker, J. M., *Am. J. Diseases Children*, **68**, 369(1944).
(22) Rapoport, S., and Guest, G. M., *J. Clin. Invest.*, **24**, 759(1945).
(23) Erganian, J. A., Forbes, G. B., and Case, D. M., *J. Pediat.*, **30**, 129(1947).
(24) Farber, H. R., Yiengst, M. J., and Shock, N. W., *Am. J. Med. Sci.*, **217**, 256(1949).
(25) Krantz, J. C., Kibler, D. V., and Bell, F. K., *J. Pharmacol. Exptl. Therap.*, **82**, 247(1944).
(26) Ligon, W. E., Madden, R. A., Davis, P. L., and Smith, P. K., *Federation Proc.*, **7**, No. 1, 240(1948).
(27) Shay, H., Komarov, S. A., Fels, S. S., Meranze, D., Gruenstein, M., and Siplet, H., *Gastroenterology*, **5**, 43(1945).
(28) Katz, J., Dryer, R. L., Routh, J. I., and Paul, W. D., *Am. J. Digestive Diseases*, **16**, 88(1949).
(29) Pauls, F., Wick, A. N., and MacKay, E. M., *Science*, **107**, 19(1948).
(30) Shay, H., Komarov, S. A., Siplet, H., and Gruenstein, M., *Am. J. Digestive Diseases*, **14**, 99(1947).
(31) Katz, J., Dissertation, State University of Iowa, August, 1948.
(32) Brodie, B. B., Udenfriend, J., and Coburn, A. F., *J. Pharmacol. Exptl. Therap.*, **80**, 114(1944).
(33) Pearl, R., "Introduction to Medical Biometry and Statistics" ed. 3, W. B. Saunders, Philadelphia, 1940.

---

## WHO MAKES IT?

The National Registry of Rare Chemicals, Armour Research Foundation, 33rd, Federal and Dearborn Streets, Chicago, Ill., seeks information on sources of supply for the following chemicals:

Sphaerophorin
Atraric acid
Divarin
Pulvinic acid and methyl ester
L-α-Glycerylphosphorylcholine
*d*-Laudanosine
Canadine
Barbatinic acid
4-Amino-8-nitroquinoline
Obtusatic acid
Divaricatic acid
Atranorin
Shikimic acid
2,3-Dimercaptopropyl ethyl ether
2-Methyl-8-hydroxyquinoline
Muscarine
Bulbocapnine
Adenine thiomethyl pentoside
Phosphorylthiocholine
L-Mannose

# A Study of the Modified Bell and Krantz Method as Applied to the Assay of the Three U. S. P. Digitalis Glycosides*

By E. E. KENNEDY

**A study of the Bell and Krantz method using tetraethylammonium hydroxide as the base for the picrate reagent, and applying it to the assay of the three U. S. P. digitalis glycosides, yields encouraging results. By reading the optical density at 495 mμ on a Beckman Quartz Spectrophotometer, instead of at 525 mμ, the sensitivity of the method is greatly increased. The three glycosides do not produce the same amount of color with respect to one another on a molar basis. A decrease in the molar extinction coefficient was noted with increase in molecular weight. Accuracy of the method is claimed to be within ±2 per cent.**

AT PRESENT there are two official colorimetric control methods (1) for the assay of digitoxin tablets and injection. There are, however, no official color control methods for the remaining two U. S. P. digitalis glycosides, namely, digoxin and lanatoside C. It would seem that since these three glycosides are so similar in chemical structure there should be one assay method which would apply to all three U. S. P. digitalis glycosides. Of the two U. S. P. control procedures (1) for digitoxin, No. 1 has proved more satisfactory than No. 2 in our laboratories. The U. S. P. method No. 1 is based on the Baljet (2) color reaction and was developed by Bell and Krantz (3). A modification of this method (4) has recently been suggested by its originators after having studied the color reaction more thoroughly. They have suggested that tetraethylammonium hydroxide be used in place of sodium hydroxide as the base for the picrate reagent. The writer has confirmed their work after considerable experimental study and believes that this method for digitoxin could be applied quantitatively not only to digitoxin, but also to the measurement of the other official glycosides of digitalis. It is therefore the purpose of this paper to show that solutions of the three U. S. P. digitalis glycosides can be assayed by the same method with good results and to recommend that the following procedure be studied and considered for adoption by the U. S. P.

## EXPERIMENTAL

The Beckman Quartz Spectrophotometer employing 1-cm. cells was used for all the experimental work.

A time study was made at room temperature for the three glycosides. It can be seen from Fig. 1 that the intensity of each color for each glycoside reaches a maximum after about twenty-five minutes and levels off until after about thirty-five to forty minutes, at which time the optical density begins to decrease slowly. Thirty minutes was chosen as a convenient time for color measurement since it fell at about the center of the maximum in the curve obtained for each glycoside.

Figures 2, 3, and 4 illustrate two different points. The straight line in each case shows that all three glycosides conform to the Beer-Lambert law at both 495 and 525 mμ. Curves obtained by Bell and Krantz (5) for the various glycosides at 525 mμ are conic sections. However, their curves represented much higher concentrations of the glycoside, and the portion of their curves below a concentration of 5 mg. per 100 cc. follow essentially the Beer-Lambert law. It is also obvious from the figures that the sensitivity of the color reaction is much greater if the measurement is made at the lower wave length of 495 mμ. Bell and Krantz (4) have also pointed out that the use of tetraethylammonium hydroxide increases the sensitivity over the old method (1). However, the writer finds that by measuring at 495 mμ instead of 525 mμ the sensitivity is increased still greater over the present U. S. P. method (1), which employs sodium hydroxide as the base and is measured at 525 mμ. It is realized that there may be limitations as to the wave length at which one can take measurements due to the type of instrument used. However, if a narrow-band spectrophotometer is available, the lower the wave length of measurement, the greater the sensitivity. The concentration of the picrate reagent, being great enough to produce a very dense yellow color, limits the wave length of measurement to very little below 495 mμ. This is due to the fact that at lower wave lengths (the blue region) of the spectrum not enough light is transmitted through the blank solution. After some experimentation on this point, it has been found that 495 mμ is the most suitable wave length for the measurement. If a filter photometer is used it is recommended that a filter having a maximum transmission at 525 mμ be used.

The molar extinction coefficient for digitoxin was determined by the following procedure to be about $8.1 \times 10^3$ at 525 mμ and $1.74 \times 10^4$ at 495 mμ. That for digoxin was $5.9 \times 10^3$ at 525 mμ and $1.54 \times 10^4$ at 495 mμ. Lanatoside C has a coefficient of $5.53 \times 10^3$ at 525 mμ and $1.29 \times 10^4$ at 495 mμ. It may readily be observed that the average sensitivity for these three glycosides when measured at 495 mμ is about 2.4 times that when measured at 525 mμ. It is for this reason that the lower wave length is

* Received May 12, 1949, from Eli Lilly and Co., Indianapolis, Ind.

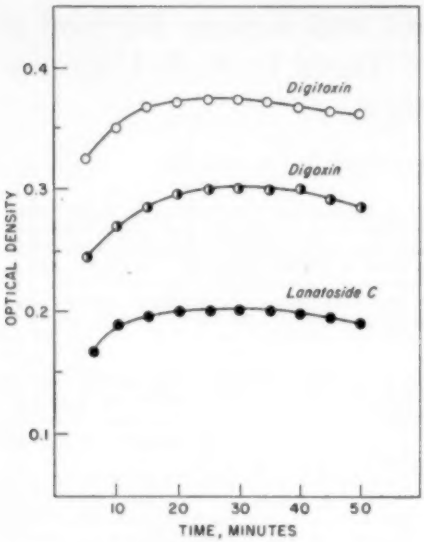



Figure 1.

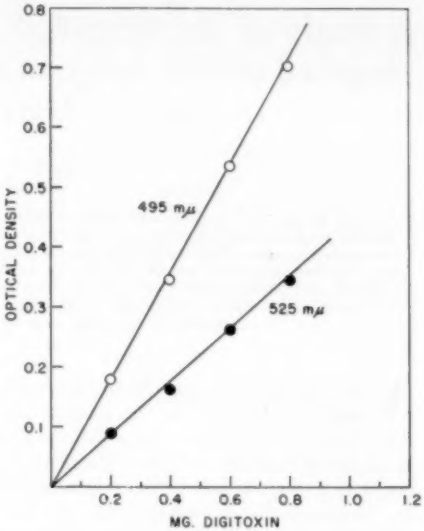



Figure 2.

suggested if the instrument used allows one to measure at that point.

Since the color formed in the Baljet color reaction is thought to be due to the lactone portion of the glycoside molecule, one would assume that the three glycosides might produce the same amount of color on a molar basis. The author found, however, that this was not the case. From the molar extinction coefficient obtained in this study it is obvious that the three compounds do not react on a molar basis with respect to one another. The coefficients seem to decrease with increasing molecular weight. This may indicate that the additional hydroxyl group on the digoxin molecule causes a hindrance in the reaction to some extent, in view of the fact that the digoxin molecule is the same as digitoxin with the exception of having the additional hydroxyl group. However, the decrease in the coefficient from digitoxin to lanatoside C is proportionally greater than from digitoxin to digoxin. Since lanatoside C also contains the extra hydroxyl group, it leads one to assume that the large sugar portion of the lanatoside C molecule also tends to hinder the color reaction to some extent. These results are partially substantiated by the findings of Bell and Krantz (5). They offer an explanation to the differences in reactivity of the glycosides based on the supposition that there is the formation of isomers which are inactive in the case where two hydroxyl groups are attached to the molecule close to the lactone ring.

**Procedure.**—The reagent used is prepared in the following manner: Dissolve 1 Gm. of picric acid (10% $H_2O$) in 50 cc. of methanol. Add 20 cc. of 10% tetraethylammonium hydroxide and dilute to 100 cc. with distilled water. This reagent is good for only a few hours.

For the test, 10 cc. of a methanol solution of glycoside containing about 0.04 mg./cc. is transferred to a 25-cc. volumetric flask. Exactly 15 cc. of the picrate reagent is added to the flask, the contents mixed well, and allowed to stand for exactly thirty minutes. The optical density is read on a Beckman Quartz Spectrophotometer or other suitable instrument using 1-cm. cells at 495 mμ and the amount of glycoside calculated from a standard graph. A blank composed of 15 cc. of picrate reagent plus 10 cc. of methanol is used as a comparison solution.

The standard graph is prepared from the U. S. P. glycoside reference standard in the following manner: Weigh exactly 20 mg. of the reference standard and dissolve it in 100 cc. of methanol. Transfer into separate 25-cc. volumetric flasks 1.0-, 2.0-, 3.0-, and 4.0-cc. portions of this solution. Introduce a sufficient amount of methanol to bring the volume of each to exactly 10 cc. Add 15 cc. of the picrate reagent, mix well, and allow to stand for exactly thirty minutes. Read the optical densities at 495 mμ and plot the optical density readings on the ordinate scale against the corresponding glycoside concentrations on the abscissa scale. A straight line should be obtained. It is important that a glycoside standard be run with each new batch of picrate reagent to determine whether it conforms to the standard curve. If not, a correction must be made before calculating the unknowns which are to be determined with the new reagent.

**Accuracy of Method.**—Several solutions of known concentration were prepared for each glycoside using U. S. P. reference standards and determined by the above procedure. Table I shows the amount of glycoside taken and the amount found with the per cent positive or negative deviation between the two. The greatest deviation from the amount of glycoside taken for any of the three glycosides was a negative 1.6%. The accuracy of the method should be well within 2.0% of the amount of glycoside present.

No work has yet been done by the author in regard to the tablets of digoxin and lanatoside C. However, the results which have been obtained on digitoxin tablets would indicate that this method will probably be satisfactory for the determination of glycoside tablets.

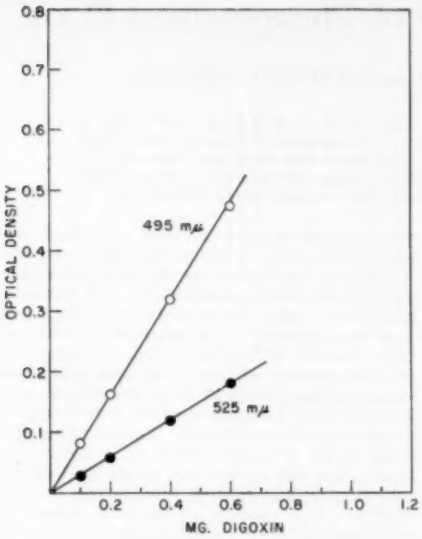



Figure 3.

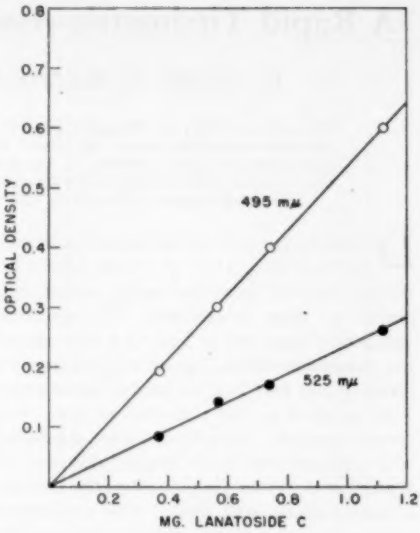



Figure 4.

TABLE I.—AMOUNT OF GLYCOSIDE TAKEN AND AMOUNT FOUND WITH THE PER CENT POSITIVE OR NEGATIVE DEVIATION BETWEEN THE TWO

| Taken, mg. | Found, mg. | Deviation from Amount Taken, % |
|---|---|---|
| | Digitoxin | |
| 0.100 | 0.101 | +1.00 |
| 0.200 | 0.203 | +1.50 |
| 0.300 | 0.300 | 0.00 |
| 0.400 | 0.403 | +0.75 |
| 0.500 | 0.492 | −1.60 |
| 0.700 | 0.690 | −1.43 |
| | Digoxin | |
| 0.100 | 0.101 | +1.00 |
| 0.200 | 0.198 | −1.00 |
| 0.300 | 0.297 | −1.00 |
| 0.500 | 0.495 | −1.00 |
| 0.600 | 0.603 | +0.50 |
| 0.700 | 0.701 | +0.14 |
| | Lanatoside C | |
| 0.189 | 0.187 | −1.06 |
| 0.378 | 0.376 | −0.53 |
| 0.567 | 0.567 | 0.00 |
| 0.756 | 0.755 | −0.13 |
| 0.945 | 0.940 | −0.53 |
| 1.134 | 1.139 | +0.44 |

## SUMMARY

1. A recommendation for further study of the method presented for the assay of the three U. S. P. digitalis glycosides is made, with possible consideration of adoption as an official U. S. P. procedure.

2. It is also recommended that a reading of the color produced by the Baljet reaction be made at 495 mμ in preference to 525 mμ, which increases the sensitivity of the method to approximately two and one-half times that when measured at 525 mμ.

3. It has been found that the three glycosides do not produce the same amount of color according to the reaction on a molar basis. A decrease in molar extinction coefficient was noted with increase in molecular weight.

4. The accuracy of the method with respect to any of the three U. S. P. digitalis glycosides is within two per cent of the amount of glycoside present.

## REFERENCES

(1) U. S. P. XIII, Mack Ptg. Co., Easton, Pa., 1946, p. 640.
(2) Baljet, H., *Schweiz. Apoth. Ztg.*, **56**, 84(1918).
(3) Bell, F. K., and Krantz, J. C., Jr., *J. Pharmacol. Exptl. Therap.*, **87**, 198(1946).
(4) Bell, F. K., and Krantz, J. C., Jr., THIS JOURNAL, **37**, 297(1948).
(5) Bell, F. K., and Krantz, J. C., Jr., *J. Pharmacol. Exptl. Therap.*, **88**, 14(1946).

# A Rapid Titrimetric Assay of Phenobarbital Elixir*

By ALBERT M. MATTOCKS† and ELMER C. VOSHALL

**The official assay of Phenobarbital Elixir was found to give high results due to chloroform-soluble resins contained therein. Potentiometric titration with alkali also gave erroneous results. A titrimetric procedure was developed whereby the elixir could be titrated directly with silver nitrate, using a silver, silver-silver chloride electrode system. Results by this method were accurate and reproducible.**

DETERMINATIONS of phenobarbital in Phenobarbital Elixir U. S. P. by the official extraction method have repeatedly yielded high results in these laboratories. The abnormal values have been due, at least to a large extent, to a chloroform-soluble resinous material from the Sweet Orange Peel Tincture used in manufacture.

In an effort to find a method of assay with greater accuracy, experiments were conducted with a modification of the method described by Waters, *et al.* (1) for the potentiometric titration of phenobarbital with alkali. Very satisfactory results were obtained with phenobarbital powder; however, high values were obtained with the elixir, although these were better than when the extraction method was used.

Preliminary experiments were carried out with charcoal, alumina, and silica adsorbents in an attempt to remove selectively either the resinous material or the phenobarbital, but no promising results were obtained.

Attention was finally turned toward application of the Fisher Senior Titrimeter to the titration of phenobarbital with silver nitrate in a modification of the procedure of Budde (2). Although Budde's method was applicable originally only to clear and relatively pure solutions of phenobarbital, since it depended upon the appearance of turbidity for an end point, it was thought by the present authors that the use of a silver, silver-silver chloride electrode system would make possible the potentiometric titration of phenobarbital in mixtures. This system was tested and found to give excellent results, making it possible to titrate Phenobarbital Elixir directly with a high degree of accuracy and in a short period of time.

## EXPERIMENTAL

**Potentiometric Titration of Phenobarbital with Alkali.**—Previous workers (1) reported the use of the Fisher Titrimeter for alkali titrations of phenobarbital, but they added titrant in 0.2 ml portions and determined end points by means of differential curves ($\Delta$ *p*H/$\Delta$ ml. *vs.* ml.). It was recognized by the present authors that more accurate end points were desirable in order that reasonably small samples could be used. Residual titration of an excess of alkali was preferred rather than direct titration so that the use of high concentrations of alcohol could be avoided. Also, the titrimeter is more conveniently used routinely for titrations to a definite *p*H rather than for differential curves. Therefore, the *p*H of the reaction solution at equivalence point was determined experimentally in the following manner: Samples of 0.2 Gm. phenobarbital were accurately weighed into 250-ml. beakers. To each sample was added 30 ml. of carbonate-free 0.1 *N* sodium hydroxide, and the mixture was stirred mechanically until solution was effected (usually two to three minutes). One hundred milliliters of water was added, and the solution was then placed on the titrimeter, which had been fitted with a calomel electrode and a glass electrode for alkaline range, and titrated with 0.1 *N* sulfuric acid. Readings of volume and *p*H were made after one-drop additions of titrant in the range of equivalence point, and differential curves of $\Delta$ *p*H/$\Delta$ ml. *vs.* *p*H were plotted. In calculating $\Delta$ *p*H/$\Delta$ ml. it was found most satisfactory to determine the average volume of one drop from the burette used (0.05 ml. in this case) and use this volume for $\Delta$ ml. Errors introduced by this approximation were found to be less than those obtained by using burette readings for measurement of one-drop additions, the error in the latter method being 0.02/0.05 or 40%. The *p*H value for the equivalence point, obtained as an average of ten determinations, was 9.79 with a mean deviation of 0.03.[1] This value falls within the calculated *p*H range. The calculated *p*H was 9.6 at exact equivalence and 9.9 one drop short of equivalence, these values being calculated by the method of McAlpine (3), using 7.41 as the *p*K of phenobarbital (4), 140 ml. as the final volume and 0.2 Gm. as the amount of phenobarbital present.

Accurately weighed samples of about 0.2 Gm. phenobarbital were titrated by the above procedure with the modification that the titrimeter was set to indicate end point at *p*H 9.80, and acid was added to this point. Only initial and final volume readings were made. The normality of the alkali was determined each day by titration to the same *p*H (9.80) with 0.1 *N* acid. The calculated error of this assay, based on the determination of equivalence to the nearest 0.05 ml. and two burette readings each to 0.01 ml., was 0.7%. Results are shown in Table I.

Accurate samples of Phenobarbital Elixir containing 0.43, 0.40, and 0.37 Gm. phenobarbital per 100 ml. were prepared in volumetric flasks using accu-

* Received May 23, 1949, from the School of Pharmacy, Western Reserve University, Cleveland, Ohio.

† Present address: American Pharmaceutical Association Laboratories, Washington 7, D. C.

[1] The Fisher Titrimeter has an accuracy to within 0.05 *p*H or 0.005 v., but changes in *p*H or voltage, relative values, may be read within 0.02 *p*H or 0.002 v.; hence, readings were made to the latter degree for a given calibration of the instrument.

TABLE I.—RESULTS OF PHENOBARBITAL ASSAYS

| Sample No. | Powder, Alkali Titration, % of Actual | Elixir: Extraction, % of Actual | Elixir: Alk. Tit. of Extd. Residue, % of Actual | Elixir: Direct Alkali Titration, % of Actual | Elixir: Silver Nitrate Titration, % of Actual |
|---|---|---|---|---|---|
| 1 | 99.5 | 104.2 | 104.1 | 105.4 | 101.1 |
| 2 | 100.5 | 107.3 | 103.9 | 104.2 | 99.8 |
| 3 | 100.4 | 111.5 | 108.0 | 103.8 | 100.5 |
| 4 | 102.0 | 109.2 | 100.0 | 105.4 | 100.2 |
| 5 | 100.8 | 115.2 | 110.3 | ... | 99.9 |
| 6 | 99.4 | 114.4 | 107.9 | ... | 100.3 |
| 7 | 99.6 | 109.4 | 101.7 | ... | 100.8 |
| 8 | 99.3 | 115.2 | 105.5 | ... | 100.2 |
| 9 | 99.0 | 114.8 | 106.1 | ... | 100.6 |
| 10 | 100.3 | 105.4 | 98.1 | ... | 99.8 |
| 11 | ... | 108.2 | 102.6 | ... | 99.8 |
| 12 | ... | 110.8 | 99.1 | ... | 100.9 |
| 13 | ... | ... | ... | ... | 99.8 |
| 14 | ... | ... | ... | ... | 98.7 |
| 15 | ... | ... | ... | ... | 98.5 |
| 16 | ... | ... | ... | ... | 99.7 |
| 17 | ... | ... | ... | ... | 99.7 |
| 18 | ... | ... | ... | ... | 101.2 |
| 19 | ... | ... | ... | ... | 99.6 |
| 20 | ... | ... | ... | ... | 100.1 |
| 21 | ... | ... | ... | ... | 98.5 |
| Av. | 100.1 | 110.5 | 103.9 | 104.8 | 100.0 |
| Mean deviation, % | 0.7 | 10.5 | 4.4 | 4.8 | 0.6 |

rately weighed quantities of phenobarbital. The elixirs were not filtered in order that no volume losses be incurred by evaporation. Samples of elixirs were assayed by the official extraction method, and the weighed residues so obtained were titrated by the above procedure. Other samples of elixir were titrated directly. Results are shown in Table I.

**Adsorption Experiments with Phenobarbital Elixir.**—Phenobarbital Elixir, undiluted and diluted with an equal volume of water, was passed through alumina columns (80–200 mesh) with the result that the coloring matter was strongly adsorbed, while the resinous material and phenobarbital were partially adsorbed in about equal proportions. Results were obtained by chloroform extraction of effluent and of alkali eluates. Granular charcoal (Cliffchar No. 10) strongly adsorbed color, resinous material, and phenobarbital, and the latter could not be completely eluted by 0.1 *N* sodium hydroxide, 0.1 *N* hydrochloric acid, or by alcohol or ether. Silica columns (26–200 mesh) did not adsorb to an appreciable extent either the phenobarbital or interfering substance.

**Potentiometric Titration of Phenobarbital Elixir with Silver Nitrate.**—Preliminary experiments were indicative of highly accurate results with silver nitrate titrations, and the following procedure was evolved for the assay of Phenobarbital Elixir: Fifty milliliters of elixir (measured in a volumetric flask) was transferred to a 250-ml. beaker with the aid of 50 ml. of 3% sodium carbonate solution. The solution was placed on the titrimeter, which had been fitted with silver and silver-silver chloride electrodes. The titrimeter scale was set at 0.5 v. withou the electrodes in the circuit[3] and then set at equivalence point of 0.5 v. This end point was previously determined by eight differential titrations, which gave an average end-point voltage of 0.498 with a mean deviation of 0.003. Silver nitrate was then added to equivalence, with only initial and final burette readings being made. Best results were obtained if the titrant were added no more rapidly than one drop every ten seconds when within 0.02 v. of the equivalence point. Each ml. of 0.1 *N* silver nitrate represents 0.1 milliequivalent (23.22 mg.) of phenobarbital. No significant variations in accuracy were noted for samples of different strength. The calculated error for the assay was 0.8%. Results are shown in Table I.

[3] In order that fluctuations could be read on the scale the instrument was set to read 0.5 v. when actual voltage was zero. Thus to obtain actual voltage 0.5 should be subtracted from all readings.

## SUMMARY

1. The official extraction method for the assay of Phenobarbital Elixir has been found to give abnormally high results.

2. Potentiometric titration with alkali gave excellent results with phenobarbital powder but high results with phenobarbital elixir, somewhat better results with the chloroform-extracted residue of the elixir.

3. A potentiometric method was devised for the direct titration of phenobarbital elixir with 0.1 *N* silver nitrate, using silver, silver-silver chloride electrodes. This procedure was found to give very accurate results with a minimum expenditure of time.

NOTE: The authors will welcome reports of results obtained by this method in other laboratories. It will be of interest to learn whether substances interfering with this method may be present in elixirs from other sources.

## REFERENCES

(1) Waters, K. L., Berg, A. L., and Lachman, R. G., THIS JOURNAL, **38**, 14(1949).
(2) Budde, Hans, *Apoth. Ztg.*, **49**, 295(1934).
(3) McAlpine, R. K., *J. Chem. Education*, **25**, 694(1948).
(4) Krahl, M. E., *J. Phys. Chem.*, **44**, 449(1940).

# Absorption Spectra of Some Sunscreens for Sunburn Preparations*,†

By ARTHUR C. GIESE, ELEANOR CHRISTENSEN, and JANET JEPPSON

**About 90 compounds which have been suggested by various workers for use in sunburn preventive preparations are tabulated with references to the literature. The structural formulas are given for the nuclei of the major families of compounds and the absorption spectra of 25 compounds are figured. The extinction coefficients at λ 2970 Å., which is at the maximum of the erythema action spectrum, have been calculated and are given in a table.**

SUNBURN is caused by absorption in the skin of sunlight ultraviolet of the band 2900–3100 Å. Maximal burn per unit of absorbed energy occurs at wave length 2970 Å. (1). Any compound which absorbs in the sunburn part of the spectrum is a potential sunscreen which may be used in a suitable oil, lotion, or ointment for a sunburn preparation to prevent these actinic rays from reaching the sensitive part of the skin. However, the successful sunscreen must also be nontoxic, nonsensitizing, and nonirritating to the skin.

The sunburn preparation, in addition to the sunscreen, contains a base or vehicle, often a scattering agent such as titanium dioxide, as well as pigment and modifiers. Formulation of such a preparation presents a variety of problems and the requirements of an ideal sunburn preparation have been outlined in detail elsewhere (2). No ideal sunburn preparation has as yet been devised although some have been made which are fairly successful in meeting certain of the requirements. Testing the efficacy of a sunscreen also presents a variety of problems and its apparent protective value depends on the method used in testing, the skin of the particular subject (3) as well as the previous exposure of the skin, and the conditions (moisture, etc.) under which the test is carried out (2). The entire problem of sunburn protection is a complex one and it is necessary to caution against the assumption that any compound which absorbs in the proper region of sunlight ultraviolet, made up in any vehicle or base will be adequate, since many formulations have proved unsatisfactory for a variety of reasons (2).

While many compounds absorb the sunburn part of sunlight (4) and a fairly large number have been suggested as possible sunscreens in the last fifteen years (5–7), no summary of these has been made since that of deNavarre (7) and data on their ultraviolet absorption have been sparse and scattered. It is the purpose of the present paper to prepare a list of the various sunscreens with references to the literature, to classify them as to their chemical affinities and to determine and compare the ultraviolet absorption spectra of representative compounds.

## SUNSCREENS AND ABSORPTION SPECTRA

**Sunscreens.**—The simplest sunscreen is a colored compound or pigment which absorbs strongly in the ultraviolet as well as in the visible spectrum, whence its color. Schwarz (9) suggests the use of brown extract of oak bark for such a purpose. Remy (10) states that in his experience a theatrical pencil used to color the skin to a moderate natural tan is very effective. Ochre and burnt umber are probably present in such a pencil in a cream base. Some tanning oils contain a dye, probably Bismarck brown (11). Any number of pigments might do as well, provided the color is not objectionable and the substance is harmless, nonsensitizing, and nonirritating. Primitive peoples are reputed to use a mud coating in some cases. The dark races are naturally protected by the skin pigment, melanin, scattered throughout the superficial layer of skin. The threshold in the skin of the dark races for a minimal burn (minimal perceptible erythema or reddening caused by dilatation of the superficial blood vessels) is of the order of ten times that for white skin (12).[1]

If a compound absorbs in the ultraviolet but not in the visible part of the spectrum, it is invisible and acts as an ultraviolet filter. Invisible sunscreens of this sort seem to have been preferred. This is in part esthetic, in part due to the notion that while it is desirable to remove the radiations which cause sunburn it is undesirable to remove the other, supposedly beneficial rays (14). From this point of view the best compound is one which in its absorption most closely parallels the action spectrum of sunburn (1). Such a compound should therefore absorb most strongly at λ 2970 Å., falling off to a low value at λ 2800 Å. and 3100 Å.

Among the sunscreens longest in use and supposedly meeting the above requirement are various fluorescent natural products such as quinine sulfate, obtained from cinchona bark; esculin, obtained

* Received May 7, 1949, from the Department of Biological Sciences, Stanford University, Calif.

† We are indebted to Professor T. C. Daniels of the College of Pharmacy of the University of California for a sample of ethyl-p-dimethyl aminobenzoate and to the late Julian M. Wells of the same college for many of the other compounds.

[1] Pigment in the white races resulting from the action of the sun is mainly located below the sensitive layers, therefore it provides little protection. Thickening of the skin is presumed to be the main accommodation on serial exposure to the sun. For a brief discussion and references to the literature, see Giese and Wells (13).

from Aesculus, the horse chestnut; and tannic acid, derived especially from galls of various trees such as oak, sumach, and hemlock. In recent years various synthetic aromatic compounds have largely displaced the natural products. Some of these substances have been substituted or otherwise modified so that a whole family of compounds derived from one are now available, representing variations on a central theme.

In Table I are given the families of compounds which seem to have been most interesting, judging from the number of different members synthesized or used. The citations refer to the entire family of compounds. The structural formulas given in the

TABLE I.—FAMILIES OF SUNSCREENS

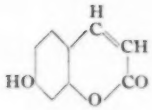
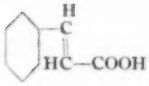
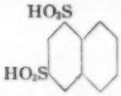
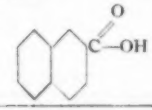
| Family | Members | Citations |
|---|---|---|
| *p*-Aminobenzoates | Dimethyl<br>Ethyl<br>Isobutyl<br>Monoglyceryl | (7, 16, 17) |
| *o*-Aminobenzoates or anthranilates | Benzyl<br>Cyclohexanyl<br>Lauryl<br>Menthyl<br>Phenyl<br>Triethanolamine | (7, 18–20) |
| Salicylates (*o*-hydroxybenzoic acid) | Amyl<br>Benzyl<br>Bornyl<br>1,3-Butyleneglycol mono-<br>Glycerylmono-<br>Homomenthyl<br>Isoamyl<br>Menthyl<br>Parathymol<br>Phenyl (salol)<br>Triethanolamine<br>Thymol<br>Salicylic acid ester of a polyalcohol | (7, 18, 20–27) |
| Pyrrones  and  | Benzyl cinnamate<br>β-Umbelliferone acetic acid<br>β-Methyl umbelliferone<br>1,3-Butylene-glycol cinnamate<br>β-Methyl umbelliferone acetic acid<br>Cinnamic acid<br>Coumaric acid (*o*-hydroxycinnamic)<br>Daphnetin or dihydroxycoumarin<br>Daphnetic-8-ethyl ether<br>Esculin (aesculin)<br>Esculetin or 6,7-dihydroxycoumarin<br>Ethyl umbelliferone<br>Homomenthyl cinnamate<br>2-Hydroxy-3-methoxycinnamic acid<br>3-Methoxy-*o*-coumaric acid<br>Methyl umbelliferone acetate<br>Methyl esculetin<br>3-Phenylcoumarin<br>Phenyl cinnamic nitrile<br>Umbelliferone (7-hydroxycoumarin)<br>Also esculin-quinine condensation products | (7, 20, 22, 24, 26, 28–33) |
| Naphtholsulfonic Acid  | Naphthol sulfonate<br>1,5-Naphtholsulfonic acid<br>2,6-Naphtholsulfonic acid<br>2,8-Naphtholsulfonic acid<br>3,2-Naphtholsulfonic acid | (7, 28, 34–35) |
| Naphthoic Acid  | β-Oxynaphthoic acid<br>α,β-Oxynaphthoic acid<br>2- Hydroxy-2-naphthoic acid | (7) |

table show the different types of chromophores employed to obtain absorption in this part of the spectrum. The benzene ring itself does not absorb sunburn radiations, there being an absorption band in the region of λ 2500 Å., but phenol or hydroxybenzene shows considerably more absorption. Benzoic acid also absorbs much more than benzene, but the aminobenzoic and the hydroxybenzoic acids are even better in this respect due to the greater resonance of the molecules. In summary, the ultraviolet chromophores of these sunscreens consist of the benzene ring in the various modifications and combinations shown. Substitutions in these compounds change the nature of absorption in a manner well known from earlier studies on dye absorption in the visible (15).

In Table II are given compounds about which there seems to be even less information. Some are inorganic compounds; some, organic with chromophores quite different from those in Table I (e.g., oils); some, mixtures of compounds of natural origin (e.g., resins, tannins). Relatively few compounds have been added to the lists recently (48). Many foreign preparations are patented and the chemical nature of the materials is not divulged. Therefore other compounds may exist which absorb the sunburn ultraviolet but which cannot be included until the information becomes available.

**Absorption Spectra.**—The absorption spectra of a number of representatives of each of the families in Table I and of a few members of Table II were determined and are given below. It would have been more interesting if all of the compounds had been tested, but unfortunately many were unobtainable at the time attempts were made to get them. The information available, enables one to see that the absorption is quite distinctive for many compounds, and that some compounds suggested in the literature as potential sunscreens are really unsuitable for the purposes for which they were meant.

TABLE II.—FAMILIES OF SUNSCREENS

| Family | Examples (or Remarks) | Citation |
|---|---|---|
| Acetanilid | ..... | (7) |
| Acetone oxalates | Butyl-benzyl acetone oxalate | (7, 36) |
| Acetophenone | Benzylacetophenone | (7, 37) |
| | Cinnamyliden acetophenone | |
| Alcohols, higher | ..... | (31) |
| Aniline | Dibenzaniline | (35) |
| Benzaldehyde-azins | Dibenzylazin | (38) |
| Benzimidazole | *o*-Methoxy-phenol, 2-*p*-methoxy, 2-*o*-tolyl, phenyl benzimidazole 5-sulfonate | (7, 24, 39) |
| Benzylamino-*o*-benzoic acid | Various substituted compounds | (40) |
| Bismuth nitrate | (Fluorescent) | (31) |
| Boric acid | (Fluorescent) | (31) |
| Butadiene | Diphenylbutadiene | (30) |
| Butyl-mesityloxide oxalate | ..... | (7) |
| Carbazole | 2-Acetylamino | (7) |
| | N-acetyl | |
| Chrysotropic acid | ..... | (7) |
| Diethylene glycol monoethylether | ..... | (20) |
| Dioxyxanthan | ..... | (7) |
| Escalol | ..... | (26, 54) |
| Fatty oils | Especially ammonium and alkali salts | (31) |
| Hydroquinone | ..... | (41, 42) |
| Hydroxybiphenyl sulfonic acids | Alkali metal salt | (43) |
| Hydroxyquinoline | Phenylquinoline | (16) |
| Ichthyol, etc. | Distillate of Tyrol hydrocarbons | (25) |
| Indazole 2-acetic acid | ..... | (7) |
| Lanolin | ..... | ..... |
| Phenyl furfuralic nitrile | ..... | (7) |
| Phenyl indole | ..... | (7) |
| Quinoxaline | 2,3-Diphenylquinaline | (7) |
| Quinine | Disulfate | (7, 16, 22, 31, 44) |
| | Oleate | |
| | Condensation products with esculin | |
| Resins | In petrolatum | (45) |
| Stilbene | Diphenylethylene | (7, 30, 37) |
| Sulfa compounds* | Sulfanilamide | (41, 47) |
| | Sulfathiozole | |
| | Sulfapyridine | |
| Tannic acid | Mixture of compounds extracted from galls (gallic, digallic acids, etc.) | (7, 29, 46) |
| Tryptophane | (Aromatic amino acid) | (7) |
| Tyrosine | (Like tryptophane absorbs strongly in the ultraviolet) | (7) |
| Urea | ..... | (7) |
| Uric acid | (Strong ultraviolet absorption) | (7, 30) |
| Petrolatum | Especially carbolated | ..... |
| Violuric acid | ..... | (7, 30) |

* Use of sulfa compounds is somewhat questionable in view of their sensitizing action which ought to be checked (56).

From Fig. 1 it may be seen that both isobutyl and ethyl *p*-aminobenzoate have absorption spectrum which fit them well as sunscreens, the extinction between 3150 and 2900 Å. being fairly high. Menthyl anthranilate, in the same figure, on the other hand, shows a great decline in the very region where the greatest absorption is desired. Homomenthyl salicylate, Fig. 2, which proved good in formulations (2) shows a very high absorption at 2970 Å., the maximum for the erythema action spectrum. In this respect, it is better than phenyl salicylate, shown in the same figure. Amyl salicylate, isoamyl salicylate and menthyl salicylate all show satisfactory sunscreen absorption, as shown in Fig. 3. The salicylates as a group appear to be good sunscreens.

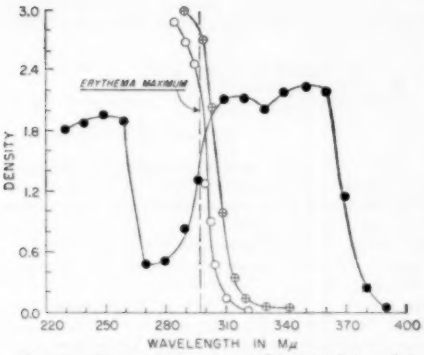



Fig. 1.—Absorption spectra of isobutyl *p*-aminobenzoate, ethyl *p*-aminobenzoate, and menthyl anthranilate each 0.01% in alcohol.

○, Ethyl *p*-aminobenzoate, 1 cm.
●, Menthyl anthranilate, 0.5 cm.
⊕, Isobutyl *p*-aminobenzoate, 1 cm.
All in alcohol, all 0.01%.

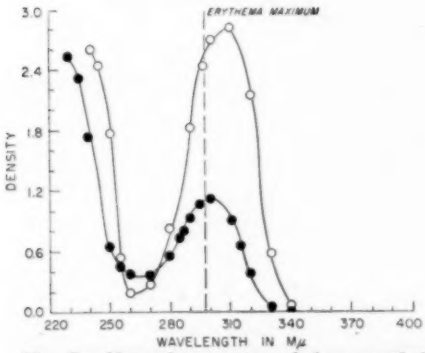



Fig. 2.—Absorption spectra of homomenthyl salicylate (0.003%) and phenyl salicylate (0.01%) both in alcohol.

○, Homomenthyl salicylate, 0.003%.
●, Phenyl salicylate, 0.01%.
Both in alcohol, 0.5 cm. cuvette.

Cinnamic acid, homomenthyl cinnamate, and benzyl cinnamate (Fig. 4) all show fairly satisfactory absorption as sunscreens, whereas β-methyl umbelliferone becomes opaque at much longer wave lengths and might be considered undesirable by some for that reason (14).

Of the naphthol sulfonic acid series, 1-naphthol 5-sulfonic acid might be considered best since the extinction coefficient is highest at 2970 Å. (see Table III). The absorption spectra are shown in Fig. 5. From Fig. 6 showing the absorption by the naphthoic acids, it is apparent that 3-hydroxy-2-naphthoic acid is better than α-β oxynaphthoic acid since for equivalent percentage concentrations the extinction at 2970 Å. is greater (see Table III).

In Fig. 7 are given the absorption spectra for acetanilid, dibenzalacetophenone, and violuric acid. Acetanilid is useless as a sunscreen, dibenzalacetophenone not too good, violuric acid fair. In Fig. 8 are given data for tannic acid and quinine sulfate, both of which seem fair. Boric acid was also tried but its absorption spectrum is omitted since the absorption is slight and no specific bands appear in the region of interest.

In Fig. 9 are data for petrolatum, carbolated petrolatum and lanolin, given in answer to the question often asked—"How effective is natural fat or grease?" It is apparent that lanolin is of little value in absorbing erythemic rays. Ordinary white petrolatum absorbs more strongly, possibly due to aromatic impurities. Carbolated petrolatum is still better, as might be expected from its content of carbolic acid. In view of this, it would be interesting to compare the effectiveness of carbolated petrolatum with that of other sunburn preparations, but no such test has been reported.

In Table III are given the extinction coefficients at λ 2970 Å. for the various sunscreens tested. In this determination the Lambert-Beer law was used:

$$T = I/I_0 = e^{-kcl}$$

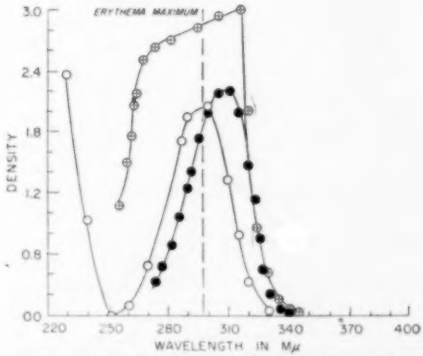



Fig. 3.—Absorption spectra of menthyl salicylate (0.1%), isoamyl salicylate (0.01%), and amyl salicylate (0.01%) all in alcohol.

○, Amyl salicylate, 0.01% 0.5 cm.
●, Isoamyl salicylate, 0.01% 1 cm.
⊕, Menthyl salicylate, 0.1% 1 cm.
All in alcohol.

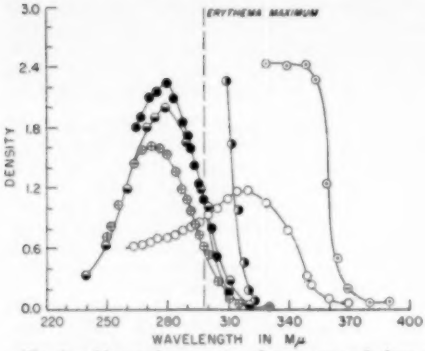



Fig. 4.—Absorption spectra of pyrones and cinnamates: β-methyl umbelliferone (0.01 and 0.001%), cinnamic acid (0.1 and 0.001%), benzyl cinnamate (0.05%), and homomenthyl cinnamate (0.005%) all in alcohol.

○, β-Methyl umbelliferone, alc., 1 cm., 0.001%.
⊙, β-Methyl umbelliferone, alc., 1 cm., 0.01%.
●, Homomenthyl cinnamate, 0.005% alc., 0.5 cm.
◒, Benzyl cinnamate, 0.05%, alc., 0.5 cm.
⊕, Cinnamic acid, alc., 1 cm., 0.001%.
◑, Cinnamic acid, alc., 1 cm., 0.1%.

where $k$ is the molecular extinction coefficient, $c$ the concentration in mole per liter, and $l$ the thickness of the absorbing layer in centimeters; $e$ is the base of the natural system of logarithms. The density reading obtained on the Beckman spectrophotometer is related to $k$ in the following manner:

$$D = \ln_e I_0/I = kcl$$
$$k = D/cl$$

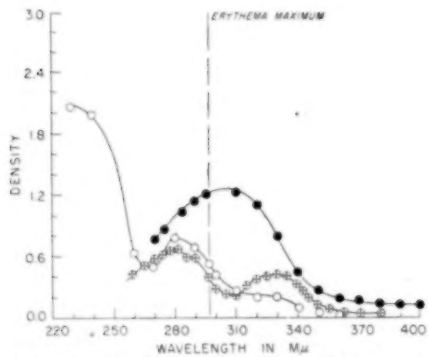



Fig. 5.—Absorption spectra of naphthol sulfonates: 2-naphthol-6-sulfonic acid (0.01%), 1-naphthol-5-sulfonic acid (0.001%), and 2-naphthol-8-sulfonic acid (0.01%) all in water.

○, 2-Naphthol-6-sulfonic acid, 0.01%, 0.5 cm.
●, 1-Naphthol-5-sulfonic acid, 0.001%, 1 cm.
⊕, 2-Naphthol-8-sulfonic acid, 0.01%, 0.5 cm.
All in water.

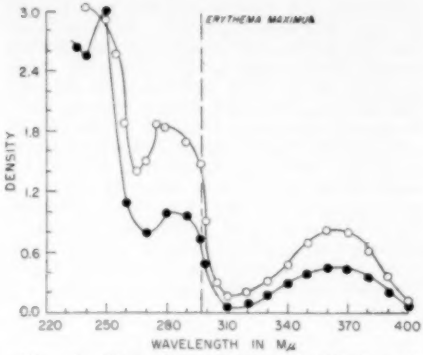



Fig. 6.—Absorption spectra of 3-hydroxy-2-naphthoic acid and oxynaphthoic acid both 0.005% in alcohol.

○, 3-Hydroxy-2-naphthoic acid.
●, α,β-Oxynaphthoic acid.
Both 0.005%, alc., 0.5 cm.

In obtaining the extinction coefficients the compounds were successively diluted until there was little deviation from the Lambert-Beer law for the 0.5- and 1.0-cm. cuvettes. In many compounds, deviations were slight over fairly wide concentration ranges. In others, on the other hand, the deviations were very marked. Some of these are indicated in the table. It is possible that in higher concentrations these compounds show some sort of molecular association which greatly decreases their absorption.

It would be desirable to have data on the specific absorption of all of the sunscreens listed in Tables I and II and on their stability under irradiation. Before they can be used commercially in preparations, it is also necessary to know whether they are nontoxic, nonsensitizing, and nonirritating to the skin. While some of the pertinent facts have been obtained

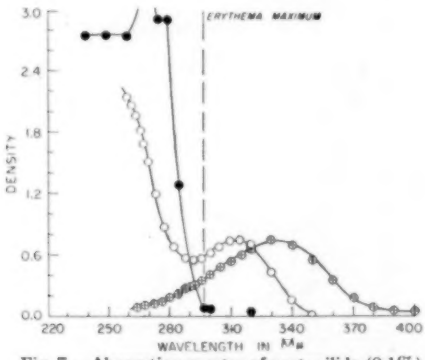



Fig. 7.—Absorption spectra of acetanilide (0.1%), violuric acid (0.01%), and dibenzalacetophenone (0.001%) all in alcohol.

○, Violuric acid, 0.01%.
●, Acetanilide, 0.1%.
⊕, Dibenzalacetophenone, 0.001%.
All in alc., 0.5 cm.

TABLE III.—EXTINCTION COEFFICIENTS FOR SUNSCREENS[a]

| Compound | State | Solvent | Molecular Weight | Extinction Coefficient[b] | Concentration, %[c] |
|---|---|---|---|---|---|
| Ethyl *p*-dimethyl aminobenzoate | s | Alcohol | 194.13 | 27,600<br>27,300 | $1 \times 10^{-4}$ |
| Ethyl *p*-aminobenzoate | s | Alcohol | 165.19 | 21,750[d]<br>21,450 | $2 \times 10^{-4}$ |
| Isobutyl *p*-aminobenzoate | s | Alcohol | 193.13 | 23,200[d]<br>22,800 | $2 \times 10^{-4}$ |
| Menthyl anthranilate | l | Alcohol | 275.374 | 941<br>956 | $5 \times 10^{-3}$ |
| Homomenthyl salicylate | l | Alcohol | 390.38 | 6,720<br>6,720 | $2.5 \times 10^{-4}$ |
| Phenyl salicylate | s | Alcohol | 214.08 | 3,850<br>3,900 | $5 \times 10^{-4}$ |
| Menthyl salicylate | l | Alcohol | 276.19 | 4,540<br>4,600 | $5 \times 10^{-4}$ |
| Amyl salicylate | l | Alcohol | 208.12 | 4,150<br>3,970 | $5 \times 10^{-4}$ |
| Isoamyl salicylate | l | Alcohol | 208.12 | 348<br>381 | $5 \times 10^{-4}$ |
| Benzyl salicylate | l | Alcohol | 228.13 | 4,060<br>4,260 | $1 \times 10^{-4}$ |
| Cinnamic acid | s | Alcohol | 148.06 | 705[d]<br>696 | $1 \times 10^{-3}$ |
| Benzyl cinnamate | s | Alcohol | 238.11 | 1,908<br>1,979 | $1 \times 10^{-4}$ |
| Homomenthyl cinnamate | l | Alcohol | 300.32 | 505<br>530 | $5 \times 10^{-4}$ |
| β-Methyl umbelliferone | s | Alcohol | 176.066 | 8,510<br>8,560 | $5 \times 10^{-4}$ |
| 2-Naphthol 6-sulfonic acid | s | Water | 304.28 | 3,310<br>3,240 | $5 \times 10^{-3}$ |
| 2-Naphthol 8-sulfonic acid | s | Water | 304.28 | 2,010<br>1,830 | $1 \times 10^{-3}$ |
| 3-Hydroxy-2 naphthoic acid | s | Alcohol | 188.17 | 3,470[d]<br>3,330 | $5 \times 10^{-3}$ |
| Acetanilide | s | Alcohol | 135.08 | 162[d] | $1 \times 10^{-1}$ |
| Violuric acid | s | Alcohol | 157.05 | 4,800[d]<br>4,760 | $1 \times 10^{-3}$ |
| Benzylacetophenone | s | Alcohol | 208.096 | 24,200<br>23,900 | $1 \times 10^{-4}$ |
| Quinine sulfate | s | Alcohol | 548.39 | 3,560<br>3,560 | $4 \times 10^{-4}$ |

[a] Tannic acid, lanolin and petrolatum, being mixtures, are omitted from this table. Tannic acid consists of a mixture of gallic, digallic acids, pyrogallol, etc.; lanolin consists chiefly of cholestery and isocholesteryl esters of higher fatty acids; petrolatum consists of semisolid hydrocarbons of the methane series.
[b] In each case the first value is for a 0.5-cm., the second for a 1.0-cm. layer of solution in the quartz cuvettes.
[c] In grams per 100 ml. of solvent.
[d] These show great deviations from the Lambert-Beer law.

for some compounds, in many cases the information is not yet published. DeNavarre (7) gives data on some of the compounds as well as percentages recommended. Giese and Wells (2), Winter (49), and Grill (48) and Lahousse, *et al.* (55), give some recent formulations. In many other cases necessary data have not been obtained. It is hoped that such information will become available in the literature.[3]

[3] In formulating ointments or lotions, sunscreens may be used directly as the only protective material present (50). In many cases, however, in addition to the sunscreen, a scattering compound is added which attenuates the light partly by absorption but mainly by scattering. Calamine (zinc oxide and 0.5% ferric oxide (25), kaolin (34), lithopone (zinc sulfide, barium sulfate, and some zinc oxide, 28), magnesium oxide (2), talc (34), titanium dioxide (16, 27, 28), and zinc oxide (16, 51) have been used. In case such scattering agents are employed, the ointment or lotion becomes white unless colored by some pigment such as burnt umber or ochre to resemble skin. Popular preference seems to be against scattering agents. Some sunburn preventive preparations with scattering materials are given in (2) as well as in most handbooks such as Harry (52) and deNavarre (7). See also Grady (53) for a consideration of scattering agents.

## SUMMARY


1. The nature of sunburn prevention is briefly discussed.

2. The properties desirable in a sunscreen are outlined.

3. The various sunscreens suggested by many workers are listed with references to the literature.

4. The absorption spectra of representative compounds are given.

5. The extinction coefficients at λ 2970 Å. for the above compounds are tabulated. (λ 2970 Å. is at the maximum of the action spectrum of sunburn.)

6. From the above data the compounds having the most desirable photic properties can be chosen.

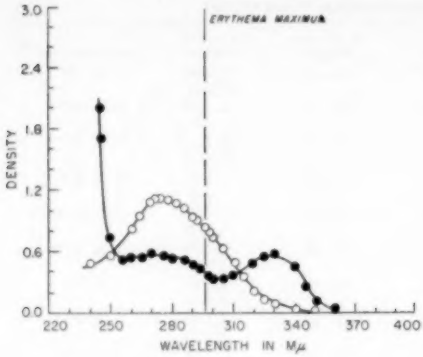



Fig. 8.—Absorption spectra of tannic acid in water (0.005%) and quinine sulfate (0.01%) in alcohol.

○, 0.005% tannic acid in water, 0.5-cm. tube.
●, 0.01% quinine sulfate in alcohol, 0.5 cm.

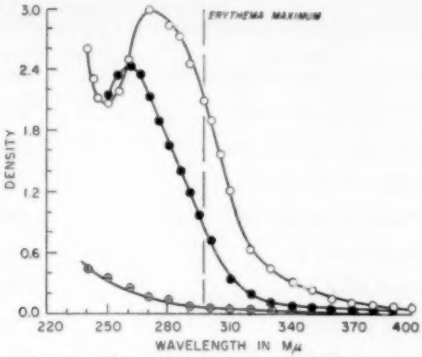



Fig. 9.—Absorption spectra of 0.5% lanolin, 1% petrolatum, and 0.5% carbolated petrolatum all in petroleum ether.

○, Carbolated petroleum jelly (0.5%) in petroleum ether, 0.5-cm. cuvette.
●, Petrolatum (1.0%) in petroleum ether, 0.5-cm. cuvette.
⊕, Lanolin (0.5%) in petroleum ether, 0.5-cm. cuvette.

## REFERENCES


(1) Coblentz, W. W., and Stair, R., *Bur. Standards J. Research*, **12**, 13(1934).
(2) Giese, A. C., and Wells, J., THIS JOURNAL, **35**, 208 (1946).
(3) Blum, H., *Am. J. Physiol.*, **146**, 118(1946).
(4) Brode, W. R., "Chemical Spectroscopy," John Wiley and Sons, New York, 1941.
(5) Stambovsky, L., *Drug and Cosmetic Ind.*, **36**, 551, 554(1935).
(6) Stambovsky, L., *ibid.*, **44**, 426, 433, 440(1939).
(7) deNavarre, M. G., "The Chemistry and Manufacture of Cosmetics," D. van Nostrand, New York, 1941, pp. 582–621.
(8) *Chemical Abstracts*, 1933–1949.
(9) Schwarz, H., *Chemical Abstracts*, **31**, 6413(1937).
(10) Remy, C. E., 1946. Personal communication.
(11) Chilson, F., *Drug and Cosmetic Ind.*, "Modern Cosmetics" (1938).
(12) Ellinger, F., "The Biologic Fundamentals of Radiation Therapy," Elsevier, New York, 1941, pp. 163–176.
(13) Giese, A. C., and Wells, J., *Sci. Monthly*, **62**, 458 (1946).
(14) Memmesheimer, A. M., *Fette u. Seifen*, **40**, 639 (1939).
(15) Conn, H. J., "Biological Stains," Stain Commission, Geneva, N. Y., 1936.
(16) Kalish, J., *Drug and Cosmetic Ind.*, **48**, 158(1941).
(17) Rothman, S., and Henningsen, A. B., *J. Investigative Dermatol.*, **9**, 307(1947).
(18) Redgrove, H. S., *Pharm. J.*, **142**, 589(1939).
(19) Carpenter, M. S., *Chemical Abstracts*, **34**, 226(1940).
(20) Fries Brothers, Inc., New York. Advertisements and Personal Communication.
(21) Hall, R. A., *Chemical Abstracts*, **31**, 5111(1937).
(22) Hewitt, M. L., *ibid.*, **31**, 216(1937).
(23) Stocklebach, F. E., *ibid.*, **34**, 598(1940).
(24) Heber, C. F., *Svensk Kem. Tid.*, **50**, 144(1938).
(25) Bachem, A., and Fantus, B., *Arch. Phys. Therapy*, **20**, 69(1939); *Chemical Abstracts*, **33**, 5071(1939).
(26) Kalish, J., *Drug & Cosmetic Ind.*, **44**, 168(1939).
(27) Frydlander, J. H., *Chemical Abstracts*, **34**, 4863(1940).
(28) Eder, J. M., and Freund, L., *ibid.*, **29**, 557(1935).
(29) Reichert, B., and Böhme, H., *Deut. Apoth. Ztg.*, **52**, 604, 1106(1937).
(30) Ohlsson, E., *Progressive Perfumery Cosmetics*, **1938**, 18, 26, 35, 45, 51(1938).
(31) Rollier, R., *Chemical Abstracts*, **36**, 6310(1942).
(32) Poizat, L., and Lahousse, J., *ibid.*, **34**, 7933(1940).
(33) Casati, A. M. C., and Gannard, J. L., *ibid.*, **36**, 5322 (1942).
(34) Ueno, S., and Ueno, E., *ibid.*, **34**, 8186(1940).
(35) Pöckel, K., and Wagner, I., *Arch. Pharm.*, **280**, 373 (1942).
(36) Forster, J. A. B., *Chemical Abstracts*, **36**, 4675(1942).
(37) Kimmig, J., and Düker, R., *Strahlentherapie*, **65**, 315 (1939).
(38) Jordan, A., *Chemical Abstracts*, **35**, 6740(1941).
(39) Merkel, E., and Wiegand, C., *ibid.*, **33**, 6532(1939).
(40) Isermann, S., Ohlsson, E., and Oestrup, J. W., *ibid.*, **32**, 1410(1938).
(41) Tinao, M. Mateo, and Vidal, Antonio Z., *ibid.*, **42**, 3912 (1948).
(42) Meeker, D., and Henderson, E. E., *ibid.*, **36**, 4293 (1942).
(43) Fitzgerald, D., *ibid.*, **29**, 7587(1935).
(44) Hagen, H. H., *ibid.*, **32**, 6400(1938).
(45) Hersberger, A. B., and Cowles, H. C., *ibid.*, **36**, 2690 (1942).
(46) Ellinger, F., *ibid.*, **29**, 2311(1935).
(47) Karolyi, I., *ibid.*, **42**, 3135(1948).
(48) Grill, F., *Pacific Drug. Rev.*, **40**, 42(1948).
(49) Winter, F., *Soap, Perfumery & Cosmetics*, **19**, 729 (1946).
(50) Stakosch, E. A., *J. Investigative Dermatol.*, **4**, 233 (1941).
(51) Foulon, A., *Allgem. Oel-u. Fett-Ztg.*, **37**, 110(1940).
(52) Harry, R. G., "Modern Cosmeticology," Chemical Publishing Co., Brooklyn, N. Y., 1940, Chap. 14.
(53) Grady, L. D., *Am. Perfumer Essent. Oil Rev.*, **50**, 443(1947).
(54) Karl, P., *Chemical Abstracts*, **31**, 5509(1937).
(55) Lahousse, J. E. G., Casati, A. M. C., and Gannard, J. L., *ibid.*, **42**, 3537(1948).
(56) Blum, H., *J. Investigative Dermatol.*, **4**, 159(1941).

# The Colorimetric Determination of Estrone, Equilin and Equilenin in Mixtures*

By DANIEL BANES†

**Equilin and equilenin produce stable pigments when treated with dibromoquinonechloroimide, while estrone is unaffected. Upon conversion of the estrogens to their benzenesulfonates only equilin retains its sensitivity to BQC. These tests, in conjunction with the Kober reaction as modified by Haenni, afford a method for the colorimetric determination of estrone, equilin, and equilenin in the ketonic fraction of extracts from pregnant mares' urine.**

CAROL, Molitor, and Haenni (1) have described a procedure for the determination of estrone, equilin, and equilenin in ketonic mixtures by infrared spectrophotometry, but its usefulness is limited by the small number of requisite instruments available. Ultraviolet spectrophotometric techniques, such as that developed by Friedgood and Garst (2), for the analysis of human urinary estrogens are inapplicable to mares' urine because the ultraviolet absorption spectra of estrone and equilin are indistinguishable. An inability to differentiate the three major estrogenic ketosteroids completely, when present in mixtures normally encountered, also obtains in the various colorimetric (3–7), gravimetric (8), and biological (9) assays for estrogens hitherto reported.

Among the reagents employed in analyzing phenolic materials, dibromoquinonechloroimide (BQC or Gibb's reagent) is particularly convenient because of the ease with which it forms highly colored products with active phenols. It was felt that equilenin, a $\beta$-naphthol with the $\alpha$-position intact, should react with BQC differently from estrone, a $p$-substituted phenol. When treated with an excess of BQC in faintly acid media, equilenin readily yielded a stable red pigment extractable with chloroform. (The extract was washed with alkali to remove brown by-products formed from the reagent during the course of the reaction.) Maximum intensity was attained within an hour, and a series of colors derived from varying quantities of equilenin obeyed Beer's law between 520 and 540 m$\mu$ (Fig. 1 *B*). Under the same conditions pure estrone gave practically no color. Equilin slowly developed a product similar to that of equilenin but of approximately half the intensity (Fig. 1 *A*). BQC could therefore be used to detect the presence of equilin and equilenin in estrogenic preparations.

Upon esterification of the free phenol with benzenesulfonyl chloride, equilenin lost its reactivity toward BQC completely. Equilin benzenesulfonate slowly formed a stable violet pigment ($\lambda_{max}$ = 570 m$\mu$, Fig. 2). This property served to differentiate equilin from the other ketosteroids, and afforded a method for its estimation in their presence, by comparison with suitable standards. Equilenin was then determined quantitatively from the intensity of the color formed in the simple BQC test, after correcting for the equilin content.

The Kober two-step reaction (10), as described by its originator and others (3, 11), yields similar pink colors with estrone, equilin, and equilenin. It is, moreover, sensitive to small variations in water or acid concentrations at several stages. Kober himself observed (12) that changes in the reagent and in conditions of the reaction would emphasize differences in the behavior of the estrogens; unfortunately he was unable to complete his work and publish his findings. Haenni (13), who studied the reaction intensively, showed that it is influenced by the ferric ion, and that characteristic colors can be formed for each of the estrogenic diols during a single development period by controlled variation of the phenolsulfonic and sulfuric acid concentrations. He described a set of stable Kober reagents which contain appreciable amounts of ferric salt and water, to obviate the effects of those substances.

Experimentation with the Kober-Haenni reagent indicated that the estrogenic ketosteroids in alcoholic solution exhibited their most pronounced differences in the presence of large amounts of free sulfuric acid. In approximately 22 *N* acid solution, estrone, heated with Kober-Haenni reagent, developed a deep orange-red with green fluorescence. Equilin gave a blue coloration[1] and equilenin an orange-pink with an in-

* Received June 27, 1949, from the Chemical Branch of the Medical Division, Food and Drug Administration, Federal Security Agency, Washington, D. C.

Part of a dissertation to be presented to the Department of Chemistry, Georgetown University, Washington, D. C., in partial fulfillment of the requirement for the degree of Doctor of Philosophy.

† The writer wishes to thank Jonas Carol for his helpful advice and valuable analytical assistance during this investigation.

[1] This color could not be used analytically because it was found to be nonspecific. The nature of the related substances which also develop a blue color in the test is under investigation. It appears that iso-equilin A (14) may be one of them, but its presence in urine extracts has not yet been demonstrated.

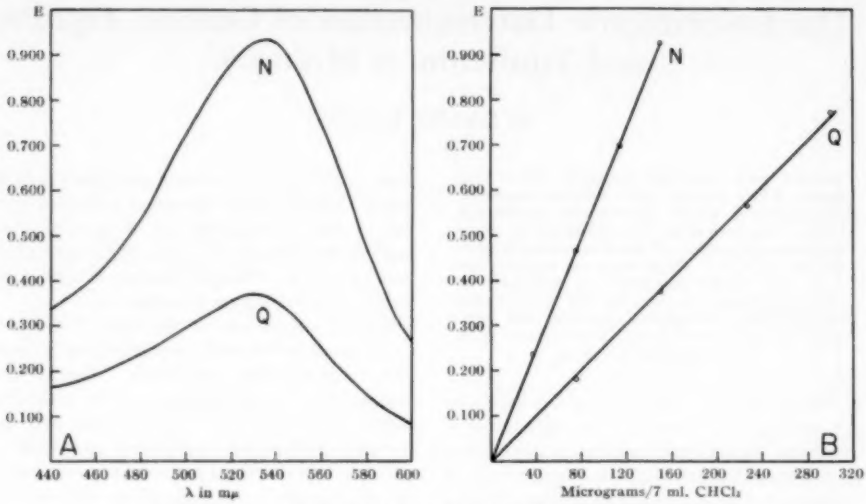



Fig. 1.—Color developed by the action of BQC on free estrogens.
*A*. Absorption spectra for equilenin (*N*) and equilin (*Q*), 150 micrograms/7 ml. $CHCl_3$.
*B*. Optical densities at 530 mμ, 0–300 micrograms estrogen/7 ml. $CHCl_3$.

tensity about 0.3 that of estrone at 510 mμ ($\lambda_{max}$ for estrone, Fig. 3). All three colors obeyed Beer's law at that wave length and were stable for hours. The optical density of the color developed in the Haenni modification of the Kober reaction, corrected for the effect of equilin and equilenin previously determined, measured the quantity of estrone present in an estrogenic solution.

The alcoholic derivatives of the ketosteroids, the estrogenic diols, behaved in a manner analogous to that of the parent substances. These phenolic alcohols were separated from the ketones by the use of Girard Reagent T, according to the procedure of Carol and Rotondaro (8). Other phenols, acidic substances, and sterols in gravid mares' urine were also removed following that

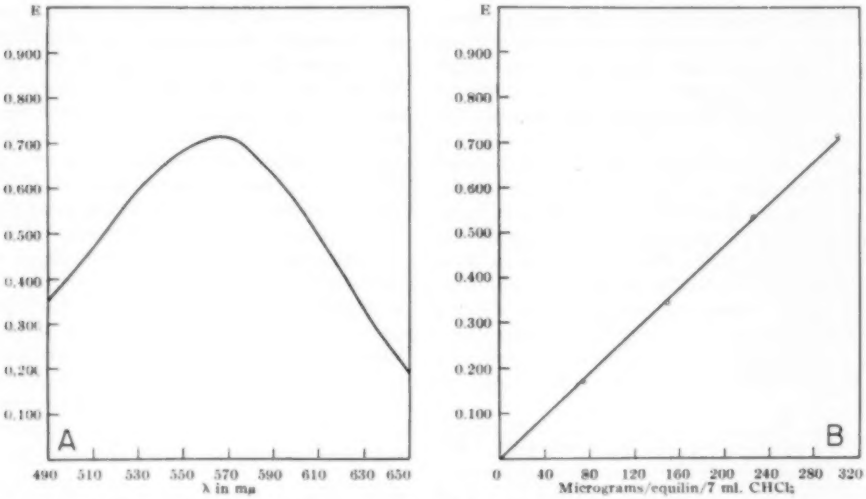



Fig. 2.—Color developed by the action of BQC on equilin benzenesulfonate.
*A*. Absorption spectrum, 300 micrograms equilin/7 ml. $CHCl_3$.
*B*. Optical densities at 570 mμ, 0–300 micrograms equilin/7 ml. $CHCl_3$.

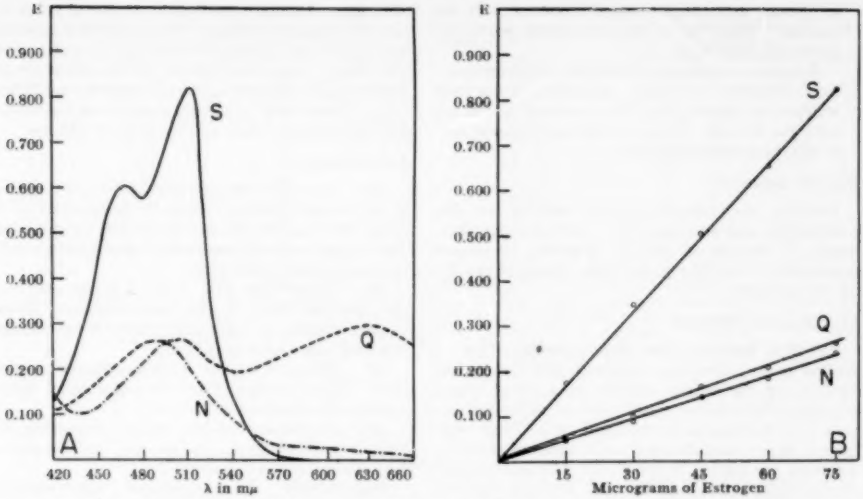



Fig. 3.—Color developed by the action of 10-ml. Kober-Haenni reagent on 1 ml. of alcoholic estrogen solution.

*A*. Absorption spectra of estrone (*S*), equilin (*Q*) and equilenin (*N*).
*B*. Optical densities at 510 mμ, 0–75 micrograms estrogen.

procedure, by extraction with the specified immiscible solvents. The estrogenic ketosteroid fraction thus isolated consisted chiefly of estrone, equilin, and equilenin, which were estimated by means of the three colorimetric reactions discussed, according to the method proposed below.

## EXPERIMENTAL

### Apparatus

A spectrophotometer or photometer capable of indicating spectral bands of the order of 2 mμ or less in the region of 400–700 mμ. (A Beckman Quartz Spectrophotometer, fitted with matched 1-cm. absorption cells, was used in this investigation.)

### Reagents

*Benzenesulfonyl Chloride.*—Dry the reagent grade product by redistilling in all-glass apparatus.

*Pyridine.*—Redistill over solid KOH in all-glass apparatus.

*Buffer Solution.*—Dissolve 220 Gm. of crystalline sodium acetate, $CH_3COONa.3H_2O$ (or 133 Gm. of the anhydrous salt) in 600 ml. of water. Add 20.0 cc. glacial acetic acid, dilute to 1 L. and mix. The *p*H of the reagent is 5.2 to 5.4.

*BQC Reagent.*—Prepare a 0.5% solution of reagent grade crystalline dibromoquinonechloroimide in ethyl alcohol just prior to use. The solution deteriorates progressively, yielding undesirable background colors. The solid reagent is sensitive to light and moisture and should be stored in a brown glass bottle in a desiccator. It may be recrystallized once from boiling methanol. M. p. 82 to 83°.

*Kober-Haenni Reagent.*—Dissolve 1.054 Gm. of $FeSO_4.(NH_4)_2SO_4.6H_2O$ (Mohr's Salt) in about 20 ml. $H_2O$, and add 1 ml. 30% $H_2O_2$. Mix, heat until effervescence ceases and dilute to exactly 50 ml. To 3 volumes of the iron solution in a volumetric flask add $H_2SO_4$ with cooling to make 100 volumes.

Redistill U. S. P. phenol, discarding the first 10% and the last 5%. Collect the distillate with exclusion of moisture in a dry tared flask of about twice the volume of the phenol to be distilled and equipped with a glass stopper. Place the stoppered flask in an ice bath to solidify the phenol, breaking the top crust with a glass rod to be sure of complete crystallization. Dry and weigh the flask. Add to the phenol 1.13 times its weight of the iron-sulfuric acid solution, stopper the flask, and allow to stand without cooling but with occasional mixing until the phenol is liquefied (approximately thirty minutes or less). Shake the mixture vigorously until homogeneous and allow to stand in the dark sixteen to twenty-four hours. Add to the mixture 23.5% of its weight of a solution of 100 volumes of $H_2SO_4$ in 110 volumes of $H_2O$. Shake the mixture vigorously to homogeneity. Transfer to dry glass-stoppered bottles and store in the dark. Shake vigorously before removing aliquots for use.

For the estrone determination, dilute 10.0 ml. of the stock solution to 100 ml. with 24 *N* $H_2SO_4$ (2 vol. acid + 1 vol. $H_2O$) just prior to use, shaking the mixture vigorously to homogeneity.

### Standard Solutions[2]

*Estrone Standard.*—Seventy-five micrograms/-ml. Dissolve 37.5 mg. estrone, accurately weighed in alcohol, and dilute to exactly 500 ml. with the solvent. Store in a glass-stoppered container, protected from light.

*Equilin Standard.*—Seventy-five micrograms/-ml. Dissolve 37.5 mg. equilin, accurately weighed,

[2] Colors produced in the reactions may vary with the character of the reagents, and it is necessary that standards be treated with the samples in all cases.

in alcohol, and dilute to exactly 500 ml. with the solvent. Store in a glass-stoppered container, protected from light.

*Equilenin Standard.*—Seventy-five micrograms/-ml. Dissolve 37.5 mg. equilenin, accurately weighed, in alcohol, and dilute to exactly 500 ml. with the solvent. Store in a glass-stoppered container, protected from light.

### Sample Solution

Dissolve the ketonic residue isolated by the method of Carol and Rotondaro (8) in a convenient, measured volume of alcohol. Remove an aliquot containing 1.5 to 2.0 mg. to a flask, dilute to exactly 25 ml. and mix.

### Colorimetric Method

**(A) BQC Reaction after Esterification.**—Using a stream of air, *carefully* evaporate *just* to dryness 10.0 ml. of the sample solution in a 50-ml. glass-stoppered Erlenmeyer flask. (Avoid prolonged exposure of the residue to heat and air.) Treat similarly a 10-ml. alcohol blank and a series of alcoholic solutions containing, respectively, 150 and 300 μg. equilin, 300 μg. equilenin, and 750 μg. estrone. Cool in a vacuum desiccator thirty minutes. Add to each of the flasks 2.0 ml. dry pyridine and 0.2 ml. benzenesulfonylchloride, stopper, and let stand overnight. Mix with 15 to 20 ml. water and wash into a separator. Rinse the flask with several 10-ml. portions of water, then with 20 ml. $CHCl_3$, and add each to the separator. Shake vigorously at least one minute and remove the $CHCl_3$ layer to a 50-ml. glass-stoppered Erlenmeyer flask. Extract with another 20-ml. portion of $CHCl_3$, combine extracts and evaporate to dryness. Dissolve the residue in 2.0 ml. alcohol by warming gently in the stoppered flask. Cool and mix with 4.0 ml. buffer solution and 2.0 ml. 0.5% BQC reagent,[3] and let stand four hours. Measure in 7.0 ml. $CHCl_3$ and mix carefully. Add 20 ml. 10% NaOH and shake vigorously at least one minute. Separate the chloroformic extract and filter rapidly through a dry, folded paper. Determine the optical density of the sample and standard solutions relative to the blank at 570 mμ.

**(B) BQC Reaction.**—Transfer 5.0 ml. of the sample solution to a separatory funnel. Prepare a 5-ml. alcohol blank, and a set of standards—150 μg. equilin, 75 μg. equilenin, 150 μg. equilenin, 375 μg. estrone—each made up to 5.0 ml. with alcohol in a separatory funnel. Add to each separator 5.0 ml. buffer solution and 1.0 ml. 0.5% BQC solution. Mix and let stand two hours. By means of a burette add 7.0 ml. $CHCl_3$ and mix by careful shaking. Add 20 ml. 10% NaOH and shake vigorously at least one minute. Remove the clear chloroformic extract and filter rapidly through a dry, folded paper. Determine the optical densities of the sample and standard solutions at 530 mμ relative to the blank.

**(C) Kober Reaction.**—To 1.0 ml. of the sample solution in a test tube provided with a glass stopper slowly add 10.0 ml. of Kober-Haenni reagent with thorough mixing. Stopper and shake vigorously. Treat similarly a 1-ml. alcohol blank and 1.0 ml. each of the estrone, equilin, and equilenin standard solutions. Immerse the loosely stoppered tubes in a hot water bath just above the level of their contents, heat to 75°–80°, and maintainat that temperature for two hours. Cool the tubes rapidly in cold water mix by shaking, and let stand at room temperature 15 minutes. Determine the optical densities of the sample and standards relative to the blank at 510 mμ.

### Calculations

(A) Compute the approximate equilin content of the sample solution aliquot by comparison of the color developed by the action of BQC on the esterified sample with the colors developed by the equilin benzenesulfonate standards.

(B) Correct the BQC color without esterification for the effect of the (approximately) known equilin content, and calculate equilenin by comparison with the proper standards.

(C) Estimate estrone from the Kober reaction after taking account of the optical density due to equilin and equilenin at 510 mμ.

(D) Recompute equilin exactly employing the estrone and equilenin corrections, and apply all factors similarly in (B) and (C).

Alternatively, the graphical approximation method or the mathematical method of determinants may be employed.

## APPLICATION OF METHOD

The proposed method was applied to ten alcoholic solutions containing known quantities of estrone, equilin, and equilenin, and to the ketonic fractions isolated (Carol-Rotondaro method) from four synthetic solutions of the estrogens in sesame oil. Recoveries are tabulated in Tables I and II, respectively. Complex ketosteroid mixtures derived from pregnant mares' urine were analyzed by the proposed method and by the infrared spectrophotometric procedure of Carol, Molitor, and Haenni (Table III). The colorimetric method was employed for the assay of commercial pharmaceuticals containing natural estrogenic materials (Table IV).

## DISCUSSION

Data reported in Table I indicate satisfactory recoveries of all three ketosteroids from mixtures in alcoholic solution. The somewhat lower recoveries of equilin from synthetic oil solutions of estrogens is ascribable to the large number of manipulations involved and the comparative susceptibility of the substance to chemical change. Table III shows good agreement between results obtained by the proposed colorimetric method and by the infrared spectrophotometric method. The latter is simpler in application, but the former is more flexible and can be adapted to samples as small as 400 μg. Further, although the complete colorimetric method is far more complicated than the spectrophotometric procedure, the simple BQC test suffices in the assay of many pharmaceutical preparations to indicate that equilin and equilenin are absent, and that the ketosteroid residue is chiefly estrone. The infrared spectrophotometric method is subject to indeterminate errors due to background substances in crude urine extracts; interference with the colorimetric tests is most probable in the Kober reaction, and would lead to a high apparent estrone content. But the concordant quality of data obtained by use

[3] The rapid development of a red color indicates incomplete esterification, due to moisture in the pyridine or the benzenesulfonyl chloride.

TABLE I.—ANALYSIS OF ALCOHOLIC KETOSTEROID SOLUTIONS

| Sample | Estrone | | Equilin | | Equilenin | |
|---|---|---|---|---|---|---|
| | Put In, Mg. | Recovered, Mg. | Put In, Mg. | Recovered, Mg. | Put In, Mg. | Recovered, Mg. |
| 1 | 1.00 | 0.98 | 0.00 | 0.03 | 0.00 | 0.00 |
| 2 | 1.50 | 1.49 | 0.00 | 0.03 | 0.06 | 0.00 |
| 3 | 0.50 | 0.51 | 0.00 | 0.01 | 1.00 | 1.00 |
| 4 | 0.75 | 0.75 | 0.00 | 0.01 | 0.75 | 0.79 |
| 5 | 0.75 | 0.76 | 0.00 | 0.01 | 0.00 | 0.00 |
| 6 | 1.25 | 1.17 | 0.20 | 0.19 | 0.20 | 0.22 |
| 7 | 1.25 | 1.23 | 0.20 | 0.21 | 0.05 | 0.07 |
| 8 | 1.20 | 1.19 | 0.50 | 0.53 | 0.05 | 0.06 |
| 9 | 0.20 | 0.18 | 0.50 | 0.50 | 0.85 | 0.87 |
| 10 | 0.00 | 0.00 | 0.00 | 0.00 | 1.55 | 1.59 |

TABLE II.—ANALYSIS OF SYNTHETIC ESTROGEN SOLUTIONS IN SESAME OIL

| Sample 10 Ml. | Total Ketosteroids | | Estrone | | Equilin | | Equilenin | |
|---|---|---|---|---|---|---|---|---|
| | Put In, Mg. | Recovered, Mg. | Put In, Mg. | Recovered, Mg. | Put In, Mg. | Recovered, Mg. | Put In, Mg. | Recovered, Mg. |
| 1 | 9.7 | 9.8 | 9.7 | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 8.7 | 8.8 | 4.4 | 4.1 | 2.8 | 2.4 | 1.5 | 1.6 |
| 3 | 10.9 | 10.6 | 9.3 | 8.9 | 1.0 | 0.9 | 0.6 | 0.7 |
| 4 | 10.6 | 11.2 | 4.7 | 4.8 | 2.3 | 2.0 | 3.5 | 3.6 |

TABLE III.—KETOSTEROIDS IN EXTRACTS FROM PREGNANT MARES' URINE

| Sample | Ketonic Residue, Mg. | Estrone | | Equilin | | Equilenin | |
|---|---|---|---|---|---|---|---|
| | | Col., Mg. | I. R., Mg. | Col., Mg. | I. R., Mg. | Col., Mg. | I. R., Mg |
| 1 | 18.0 | 17.2 | 16.9 | 0.4 | 0.5 | 0.0 | 0.0 |
| 2 | 22.4 | 8.6 | 8.3 | 5.6 | 5.5 | 4.6 | 5.1 |
| 3 | 26.2 | 16.7 | 16.5 | 5.9 | 5.0 | 1.9 | 2.2 |
| 4 | 17.9 | 15.2 | 13.9 | 0.8 | 0.8 | 0.8 | 1.0 |
| 5 | 14.5 | 3.3 | 3.3 | 6.3 | 6.9 | 1.3 | 2.1 |
| 6 | 13.3 | 11.7 | 12.5 | 0.3 | 0.0 | 0.7 | 1.0 |
| 7 | 21.6 | 11.7 | 11.6 | 9.0 | 9.3 | 0.2 | 0.0 |

TABLE IV.—ASSAY OF COMMERCIAL PHARMACEUTICALS BY COLORIMETRIC METHOD

| Sample | Description | Ketonic Residue, Mg. | Estrone, Mg. | Equilin, Mg. | Equilenin, Mg. |
|---|---|---|---|---|---|
| 1 | Estrogenic Oil Injection | 3.0 | 2.8 | 0.0 | 0.0 |
| 2 (*a*) | Powder containing ketosteroids, | 7.7 | 6.4 | 0.3 | 0.9 |
| 2 (*b*) | cholesterol, and alpha-estradiol. Two 100-mg. portions analyzed | 7.2 | 5.7 | 0.3 | 1.0 |
| 3 | Estrogenic Oil Injection | 14.3 | 13.7 | 0.0 | 0.4 |
| 4 | Estrogenic Substance (Solid) | 20.7 | 15.0 | 4.5 | 0.2 |
| 5 | Estrogenic Oil Injection | 7.5 | 3.8 | 1.1 | 1.3 |
| 6 | Estrogenic Oil Injection | 10.7 | 9.6 | 0.1 | 0.1 |
| 7 | Estrogenic Oil Injection | 15.5 | 14.6 | 0.1 | 0.0 |

of the two independent methods, even with crude extracts, demonstrates that both are applicable to the assay of estrogenic pharmaceuticals.

## SUMMARY AND CONCLUSIONS

1. New methods have been presented for the determination of equilin and equilenin.

2. A set of three colorimetric procedures has been proposed for the estimation of estrone, equilin, and equilenin in ketonic mixtures.

3. The proposed method appears to be suitable for the assay of pharmaceuticals containing natural estrogenic materials derived from pregnant mares' urine.

4. Results of analyses show good agreement between the proposed method and the infrared spectrophotometric method.

## REFERENCES

(1) Carol, J., Molitor, J. C., and Haenni, E. O., THIS JOURNAL, **37**, 173(1948).
(2) Friedgood, H. B., and Garst, J., "Recent Progress in Hormone Research," Vol. 2, Academic Press, New York, 1948, p. 31.
(3) Cohen, S. L., and Marrian, G. F., *Biochem. J.*, **28**, 1603(1934).
(4) Talbot, N. B., Wolfe, J. K., MacLachlan, E. A., Karusch, F., and Butler, A. M., *J. Biol. Chem.*, **134**, 319 (1940).
(5) Zimmerman, W., *Z. physiol. Chem.*, **233**, 257(1935).
(6) Szego, C. M., and Samuels, L. T., *J. Biol. Chem.*, **151**, 587(1943).
(7) Umberger, E. J., and Curtis, J. M., *ibid.*, **178**, 275 (1949).
(8) Carol, J., and Rotondaro, F. A., THIS JOURNAL, **35**, 176(1946).
(9) Curtis, J. M., and Doisy, E. A., *J. Biol. Chem.*, **91**, 647(1931).
(10) Kober, S., *Biochem. Z.*, **239**, 209(1931).
(11) Venning, E. H., Evelyn, K. A., Harkness, E. V., and Browne, J. S. L., *J. Biol. Chem.*, **120**, 225(1937).
(12) Kober, S., *Biochem. J.*, **32**, 357(1938).
(13) Haenni, E. O. Unpublished Work.
(14) Hirschmann, H., and Winersteiner, O., *J. Biol. Chem.*, **126**, 737(1938).

# Acute and Chronic Toxicity of Chymotrypsin in Rats*

By J. LEYDEN WEBB, PAUL R. SAUNDERS, CECIL A. SAUNDERS, JR., and CLINTON H. THIENES

**The $LD_{50}$ of chymotrypsin in rats was found to be 65.1 ± 2.3 mg./Kg. by intraperitoneal injection. Chronic experiments were also carried out in which chymotrypsin was administered subcutaneously at four different dosage levels on alternate days for a period of four weeks. No evidence of toxicity was observed by gross and histological examination of tissues from these animals.**

THE only published data on the toxicity of chymotrypsin are those for intravenous administration in dogs, reported by Tagnon, Weinglass, and Goodpastor (1). These authors found the intravenous lethal dose to be 40–60 mg./Kg. based upon results with 24 dogs receiving doses of 25 to 60 mg./Kg. The present work was undertaken in order to obtain information regarding the acute and chronic toxicity of this enzyme in rats.

## METHODS

Male albino rats[1] were injected with physiological saline solutions of lyophilized crystalline chymotrypsin,[2] prepared by a modification of the method of Kunitz and Northrop (2). The material dissolved readily and left no residue.

## RESULTS

**Acute Toxicity.**—Preliminary experiments were carried out in an attempt to determine the lethal dose by intramuscular and subcutaneous injection in animals weighing 180 to 220 Gm. Ten rats were injected intramuscularly into the thigh at 5 dosage levels ranging from 20 to 200 mg./Kg. (2 rats per dosage). The volume of solution injected was 0.2 cc. in all cases. Within twenty-four hours sloughing of tissue occurred at the site of injection in all rats at 100, 150, and 200 mg./Kg., in one of the 2 rats at 50 mg./Kg. but in neither of the rats at 20 mg./Kg. Because of the small volume of solution injected, the chymotrypsin concentration was as high as 20% at the largest dosage. There were no fatalities in any of these animals in two weeks. In addition, one rat each was injected subcutaneously with 0.2 cc. at 50, 100, and 150 mg./Kg. respectively. Again there were no fatalities although the sloughing occurred at the 150 mg./Kg. dose. Within forty-eight hours from the time of injection, all wounds were covered with crusts, and healing continued during the two weeks of observation.

Because of the above results, intraperitoneal injections were then made in 6 groups of 10 animals each; doses of 55, 61, 67, 73, 79, and 91 mg./Kg. were injected as a 2.5% solution. The animals were observed for a period of seven days, but all deaths occurred within twenty-four hours of the injection. No deaths occurred at 55 mg., 3 died at 61 mg., 6 at 67 mg., 8 at 73 mg., and all died at 79- and 91-mg. doses. The $LD_{50}$, calculated according to the method of Miller and Tainter (3), was 65.1 ± 2.3 mg./Kg.

Post-mortem examination following death due to chymotrypsin disclosed considerable sero-sanguinous fluid in the peritoneal and pleural cavities, and petechial hemorrhages on the greater curvature of the stomach, as well as in the mesenteries, omentum, and surface of the intestine.

**Chronic Toxicity.**—Determination of the effects of prolonged administration of chymotrypsin was made on 5 groups of 3 rats each, weighing between 275 and 325 Gm. Injections of a 2.5% solution were made subcutaneously on alternate days for a period of four weeks in doses of 0 (controls), 5, 10, 25, and 50 mg./Kg., respectively. The control rats were given injections of physiological saline solution. The animals receiving chymotrypsin grew at a rate similar to that of the controls, and displayed no unusual behavior or appearance. There were no obvious local reactions to the injections. The rats were decapitated two days after the final injection. The kidneys, liver, heart, lungs, adrenal glands, cerebral cortex, and brain stem were first examined grossly, then fixed in 10% neutral formalin and imbedded in paraffin. Three sections from each organ were made at different levels and stained with phosphotungstic acid hematoxylin and triosin counterstain.[3]

The tissue sections were examined by Dr. Barbara Granger of the Department of Anatomy, who reported no differences between tissues of the controls and those injected with chymotrypsin. Particular attention was paid to the vascular system in all organs due to the possibility that the proteolytic activity of the chymotrypsin might have damaged the vessel walls, but in no case was injury observed nor were there gross signs of hemorrhage.

## SUMMARY

1. The $LD_{50}$ of crystalline chymotrypsin in rats was found to be 65.1 ±2.3 mg./Kg., following intraperitoneal injection.

* Received June 13, 1949, from the Department of Pharmacology and Toxicology, School of Medicine, University of Southern California, Los Angeles.

This work was supported in part by a grant from the Spicer-Gerhart Co., Pasadena, Calif.

[1] Obtained from the Department of Biochemistry and Nutrition, University of Southern California.

[2] The chymotrypsin was obtained from the Spicer-Gerhart Co., Pasadena, Calif. It was prepared by Dr. E. T. Krebs, Jr.

[3] The tissue preparations were made by O. I. Warren of the Department of Experimental Medicine, University of Southern California.

2. Rats were injected subcutaneously at 4 different dosage levels (5 to 50 mg./Kg.) on alternate days for a period of four weeks. No evidence of toxicity was observed by gross and histological examination of kidneys, liver, heart, lungs, adrenal glands, cerebral cortex, and brain stem of these animals.

3. Subcutaneous and intramuscular administration of the more concentrated chymotrypsin solutions produced local sloughing of tissue at the site of injection.

### REFERENCES

(1) Tagnon, H. J., Weinglass, A. R., and Goodpastor, W. E., *Am. J. Physiol.*, **143**, 644(1945).
(2) Northrop, J. G., Kunitz, M., and Herriott, R. M., "Crystalline Enzymes," ed. 2, Columbia University Press, New York, p. 98.
(3) Miller, L. C., and Tainter, M. L., *Proc. Soc. Exptl. Biol. Med.*, **57**, 261(1944).

---

# Chemical and Pharmacologic Studies on Emetine and Quaternary Emetine Derivatives*,†

By ANDREW LASSLO§ and KAZUO K. KIMURA‡,§

**Quaternary derivatives of emetine were synthesized and tested for their pharmacologic activity. These compounds showed curare-like action and marked decrease in toxicity. Structure-activity-relationships (SAR) were noted in the three quaternary derivatives. Quaternization of both nitrogens in the emetine molecule doubled the curarizing potency in comparison to the derivative in which only one of the ring nitrogens was quaternized.**

THE usefulness of emetine hydrochloride as an amebicidal agent is seriously limited by the cumulative properties of the alkaloid, its cardiotoxic effects and its narrow margin of safety. Attempts have been made to obtain derivatives of emetine with enhanced amebicidal action and less undesirable side effects.

Pyman and his co-workers (1), and Goodson, *et al*, (2) prepared a series of compounds structurally related to the formula of emetine suggested by Brindley and Pyman (3), Fig. 1. These compounds differed from emetine mainly in that the pyridine structure of the 10,11-dimethoxy-1,2,3,-4,6,7-hexahydrobenzpyridocoline ring system was missing, the two 6,7-dimethoxy isoquinoline nuclei being connected through an aliphatic chain. These $\alpha,\omega$-bis(6,7-dimethoxytetrahydroisoquinolinyl) alkanes were then further modified into compounds modelled on the bis($\beta$-3,4-dimethoxyphenylethyl-amino) alkanes. The compounds tested either lacked activity or possessed other objectionable physiological properties. The lack of success of these efforts may indicate that the entire molecule of emetine is required for the development of its action. If the latter hypothesis has merit, efforts to decrease the toxicity of emitine should take the direction of producing a modification, which would leave the original molecular structure essentially intact.

This investigation was undertaken with the purpose of examining the pharmacological and therapeutic effect of some quaternary derivatives of emetine in relation to amebiasis. It was believed that the synthesis of quaternary derivatives would alter the pharmacophore of the original molecule less than the derivatives which had been tested hitherto and decrease the toxicity of the compound, especially the toxic effect on the heart.

## CHEMISTRY

N-methyl-emetine-N,N′-dimethoiodide (L-1), N-methyl-emetine-N,N′-diethoethylsulfate (L-2), and N-benzoyl-emetine-N′-ethoethylsulfate (L-3), were synthesized.

L-1. N-methyl-emetine-N,N′-dimethoiodide: This synthesis was carried out essentially according to the directions of Karrer (4), with some modifications suggested by a study of the work of Keller and Bernhard (5) and Pyman (6). The product softened at 214° and melted at 221–222° (uncorr.).

L-2. N-methyl-emetine-N,N′-diethoethylsulfate: The compound, which has not been hitherto reported, softened at 70–71° and melted at 95–97° (uncorr.).

---

* Received June 18, 1949, from the Department of Chemistry, College of Pharmacy, and Department of Pharmacology, College of Medicine, University of Illinois, Chicago 12.
† With the technical assistance of A. Dee Diacos.
‡ Roche Research Fellow in Pharmacology, 1946–1949.
Present address: Department of Pharmacology, School of Medicine, Saint Louis University, St. Louis, Mo.
§ The authors are indebted to Dr. G. L. Webster for valuable suggestions concerning the synthesis of the quaternary emetine derivatives and to Drs. C. C. Pfeiffer and K. R. Unna for pharmacological advice.

*Anal.:* Calcd. for $C_{38}H_{42}N_2O_{13}S_2$ Mol. wt.: 803.016: N, 3.49%.
Found: 3.73%.

L-3. N-benzoyl-emetine-N′-ethoethylsulfate: The compound, which has not been hitherto described, softened at 89–90° and melted at 170–175° (uncorr.).

*Anal.:* Calcd. for $C_{40}H_{54}N_2O_8S$ Mol. wt.: 738.912: N, 3.79%.
Found: N, 3.78%.

## TOXICITY

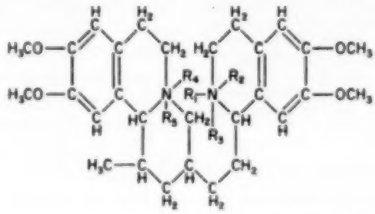
Rats treated with emetine hydrochloride exhibited symptoms of diarrhea, irritation of the cornea and, on autopsy, severe damage of the heart, liver, and kidney was observed. Rats which died of lethal dosages of N-methyl-emetine-N,N′-dimethoidide (L-1) did not exhibit any of these symptoms; their autopsy revealed collapsed, cystic, slightly hemorrhagic lungs, and only traces of hemorrhage in the kidney. It is believed that while emetine hydrochloride caused death due to its direct action on the heart, the quaternary derivative of emetine produced death through asphyxia, due to its pronounced paralytic effect upon the respiratory function.

N-methyl-emetine-N,N′-dimethoiodide was tested for chronic toxicity on albino rats in comparison with emetine hydrochloride. The experiment was carried out on a group of 28 animals (3 control) weighing 175—220 Gm. The drugs were administered by intraperitoneal injection. The results are shown in Table I.

N-methyl-emetine-N,N′-dimethoiodide was found to be considerably less toxic than emetine hydrochloride. The quaternary derivative was administered twice daily in doses of 17.2 mg./Kg. for three weeks without ill effects.

During the chronic toxicity experiments the urine of the rats was collected in metabolism cages. The isolation of emetine from the urine of the emetine hydrochloride-treated rats was not possible because the animals died shortly after receiving the equivalent of 18–20 mg. of emetine alkaloid. In rats treated with N-methyl-emetine-N,N′-dimethoiodide the compound appeared in the urine of the animals in quantities sufficient for isolation.

Adopting for emetine the formula suggested by Brindley and Pyman (1), the structural relationship of emetine and its quaternary derivatives may be illustrated in the following manner:



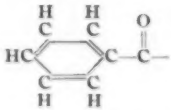
| | Compound | $R_1$ | $R_2$ | $R_3$ | $R_4$ | $R_5$ |
|---|---|---|---|---|---|---|
| | Emetine hydrochloride | H— | H— | Cl— | H— | Cl |
| L-1. | *N*-methyl-emetine-N,N′-dimethoiodide | $CH_3$— | $CH_3$— | I— | $CH_3$— | I— |
| L-2. | N-methyl-emetine-N,N′-diethoethylsulfate | $CH_3$— | $C_2H_5$— | $C_2H_5SO_4$— | $C_2H_5$— | $C_2H_5SO_4$— |
| L-3. | N-benzoyl-emetine-N′-ethoethylsulfate |  | ... | ... | $C_2H_5$— | $C_2H_5SO_4$— |

Fig. 1

TABLE I

| Compound | Dosage of Compound, Mg./Kg. | Corresponding Emetine Alkaloid Value of the Dosage, Mg./Kg. | No. of Dosages | No. of Days in Which the Total Amount of the Compound was Received | Total Amount of the Compound Received, Mg./Kg. | Corresponding Emetine Alkaloid Value of the Total Amount of of the Compound Received, Mg./Kg. | Condition of the Animal |
|---|---|---|---|---|---|---|---|
| Emetine hydrochloride | 3.45 | 3 | 6 | 6 | 20.7 | 18 | Died |
| Emetine hydrochloride | 23 | 20 | 1 | 1 | 23 | 20 | Died |
| N-methyl-emetine-N,N′-dimethoiodide | 17.2 | 10 | 43 | 22 | 739.6 | 430 | Good condition |

In the isolation of the quaternary compound from the urine a modification of Paolini's method (7) for the isolation of emetine from human urine was applied. Two hundred cc. of the rat urine was distilled under reduced pressure to about 10 cc. To the residue, 50 cc. of 95% ethyl alcohol was added and the solution allowed to stand over night. Next day the liquid was distilled under reduced pressure until about 5 cc. remained in the distilling flask. The residue was transferred to a separatory funnel and enough chloroform added to make a total volume of 30 cc. Ten cubic centimeters of saturated sodium carbonate solution was added and the aqueous layer extracted with chloroform. The chloroform layer was separated. An additional 10 cc. of saturated sodium carbonate solution was added to the remaining aqueous solution, and it was repeatedly extracted with a 30 cc. portion of chloroform. The chloroform extracts were combined, dried with anhydrous potassium carbonate, the chloroform solution filtered, and the chloroform evaporated on the steambath. The residue was taken up in 5 cc. of water and the above shaking-out procedure repeated. The residue obtained the second time after the evaporation of the organic solvent was tested.

It was found that gold chloride and platinum chloride solutions gave precipitates of a different nature with the hydrochloride (yellow) and the quaternary derivative (dark brown) of emetine. Furthermore, the commonly used picric acid solution gave with N-methyl-emetine-N,N′-dimethoiodide a crystalline precipitate of a shape different from the one obtained with emetine hydrochloride. The examination with the above precipitants revealed that the residue isolated from the urine of rats treated with N-methyl-emetine-N,N′-dimethoiodide gave precipitates identical with those obtained from the original quaternary compound. Extracts of the urine of the control rats gave no such reactions.

The injection of a solution of the compound isolated from the urine into the ventral lymph sac of four frogs exhibited the same curare-like action as the original N-methyl-emetine-N,N′-dimethoiodide.

## PHARMACOLOGY: CURARE-LIKE ACTION

Crum Brown and Fraser (8) systematically investigated the conversion of tertiary bases (such alkaloids as strychnine, brucine, thebaine, codeine, morphine, atropine, nicotine, and coniine) into quaternary metho-salts by simple addition of methyl iodide. Their results showed that the methoiodides and methosulfates of these alkaloids were all found: (*a*) to be much less toxic than their parent bases, (*b*) to have lost to a large extent the central action typical of their parent bases, and (*c*) with the possible exception of nicotine, to have a new property in common, viz., a curare-like paralysis of the neuromyal junctions of the striated musculature.

Karrer (4) pointed out, in 1916, that N-methyl-emetine-N,N′-dimethoiodide possessed curare-like action. Emetine hydrochloride and the three quaternary derivatives of emetine were compared with *d*-tubocurarine chloride for their curare-like action. It was anticipated that the two other quaternary derivatives of emetine would also have, to a certain degree, curare-like action.

**Method.**—Emetine and its derivatives were studied for curare-like activity by standardized methods (9). All compounds were screened for possible curare-like action by injections into the ventral lymph sac of the frog (*Rana pipiens*). The effect on the neuromyal junction was determined by muscular and sciatic nerve faradization of the frogs after complete paralysis. The fatal dose in frogs was determined in order to obtain some measurement of reversibility of the action on the neuromyal junction. The minimum dose causing head-drop (HD) in rabbits was determined by single intravenous infusions during a ninety-second period. Attempts were made to resuscitate completely paralyzed rabbits with artificial respiration and intravenous injections of neostigmine (25 μg./Kg.). Acute toxicity was studied in mice by single intravenous injections of a suitable concentration of each drug so that a lethal dose was contained in 0.1 to 0.2 cc. Both the $LD_{50}$ and $HD_{50}$ were calculated according to the methods of Litchfield and Fertig (10) and of Miller and Tainter (11). The ratio: $LD_{50}/HD_{50}$ was calculated to give an indication of margin of safety of the drugs for the mice.

**Results.**—Emetine hydrochloride in lethal doses paralyzed frogs. However, no effects on the neuromyal junction could be demonstrated and frogs died with diastolic arrest. This is in agreement with the work of Moulinier (12), who showed, in 1914, that lethal doses of emetine produced diastolic arrest. Furthermore, paralysis in the rabbits showed head-drop effects but the animals uniformly died of cardiac failure. Emetine caused progressive bradycardia and cardiac arrest which preceded respiratory

TABLE II.—CURARE-LIKE ACTION OF EMETINE AND EMETINE DERIVATIVES

| Compound | Mol. Wt. | Frog I. L. Peripheral Paralysis* | Frog I. L. Fatal | Rabbit 90-Sec. I. V. Head-drop | Mouse I. V. $HD_{50}$ ± S.E. | Mouse I. V. Slope | Mouse I. V. $LD_{50}$ ± S.E. | Mouse I. V. Slope | Mouse I. V. Ratio |
|---|---|---|---|---|---|---|---|---|---|
| Emetine hydrochloride | 553.56 | 100 with no CLA | 100 | 5 | 13.85 ± 0.79 | 9.07 | 16.2 ± 0.83 | 12.53 | 1.17 |
| L-1 (N-methyl-emetine-N,N′-dimethoiodide) | 778.56 | 60 with recovery | 150 | 2 | 6.41 ± 0.3 | 11.00 | 8.89 ± 0.35 | 16.3 | 1.38 |
| L-2 (N-methyl-emetine-N,N′-diethoethylsulfate) | 803.02 | 40 (in 1 hr. with recovery) | 100 | 0.5 | 5.1 ± 0.14 | 31.8 | 7.9 ± 0.16 | 29.7 | 1.55 |
| L-3 (N-benzoyl-emetine-N′-ethoethylsulfate) | 738.91 | 80 (in 1 hr. with recovery in some) | 100 | 4 | 10.7 ± 0.5 | 15.2 | 15.6 ± 0.3 | 29.9 | 1.46 |
| *d*-Tubocurarine chloride | 695.0 | 2 | 10 | 0.15 | 0.078 ± 0.002 | 14.6 | 0.136 ± 0.003 | 16.9 | 1.74 |

* All doses in Mg./Kg.

arrest by thirty seconds. Neither intravenous neostigmine nor artificial respiration was restorative in these animals.

Curare-like action was evident in all of the emetine derivatives made by the quaternization of either one or both of tertiary nitrogens (Table II). Compound L-2 (N-methyl-emetine-N,N′-diethoethylsulfate) was more potent as a curarizing drug than either L-1 (N-methyl-emetine-N,N′-dimethoiodide) or L-3 (N-benzoyl-emetine-N′-ethoethyl-sulfate) when tested on frogs, rabbits, and mice. The difference in potency was more evident in rabbits and frogs than in mice. When tested in mice, there was little difference in potency between the diethoethylsulfate (L-2) and dimethoiodide (L-1) derivatives of the quaternized emetine compounds. It is of interest to note that L-2, the bisquaternary derivative, was twice as potent in frogs and mice as L-3 which has only one quaternary nitrogen atom. In rabbits, L-2 was eight times as potent as L-3 in producing typical head-drop. *d*-Tubocurarine chloride, however, was approximately 3.3 times more effective in rabbits than the diethoethylsulfate derivative (L-2) of the quaternized emetine compound.

In the rabbit, L-2 and L-1 produced paralysis of the diaphragm which could be reversed by neostigmine and artificial respiration, whereas resuscitory measures were of little or no value in overdoses of L-3 and of emetine hydrochloride. Bradycardia produced by paralyzing doses of L-2 could be readily reversed by neostigmine.

**Comment.**—The results reported here agreed, in general, with the findings of Crum Brown and Fraser that the quaternization of tertiary nitrogen of alkaloids reduced the toxicity of the compounds and increased the curare-like action. Recent studies on the curare effect of diatropines (13) have shown the importance of one or more quaternary N atoms for curare-like action of atropine and diatropine compounds.

Using Hirschfelder atomic models, the distance between the nitrogens of the isoquinoline rings of *d*-tubocurarine has been determined as 15 Å (1 Å = 1 cm. on model). The distance between the nitrogen atoms in the quaternary derivatives of emetine was between 4.0 Å (minimum) and 8.5 Å (maximum). Thus, the inter-atomic distance between the nitrogens in the quaternary emetine derivatives is not optimal for curare-like activity. In *d*-tubocurarine chloride the distance between the methyl on the ring nitrogen and the three oxygen groups on the same ring is within a range of 5 to 9 Å (13). In the quaternary derivatives of emetine the distance between the oxygen of the methoxy groups and the alkyl groups on the quaternary nitrogen is 7.0–7.5 Å.

The structure-activity-relationship between the bi-(N,N′)-quaternized derivative (L-2) and the mono-(N)-quaternized derivative (L-3) was of interest in that the quaternization of both nitrogens in the emetine molecule made the compound twice as potent as the derivative in which only one of the ring nitrogens was quaternized. Extraction of urine obtained from rats treated with large doses of the quaternary derivative of emetine (L-2) showed the presence of a compound which was chemically and pharmacologically similar to the original quaternary salt administered to the animals. The extracted compound produced typical curare-like paralysis of frogs. It appeared from these results that the quaternary derivative of emetine was excreted unchanged by the kidney of the rat. Further experiments on bilaterally nephrectomized rats would be of interest in elucidating the fate of the drug.

Comparative studies to determine the amebicidal or clinical value of the quaternary emetine compounds would be of interest in view of the fact that the toxicity of emetine was diminished by the quaternization of its nitrogen atoms. These studies are in progress and the results will be published later.

## SUMMARY

1. Quaternary derivatives of emetine: N-methyl-emetine-N,N′-dimethoiodide, N-methyl-emetine-N,N′-diethoethylsulfate, and N-benzoyl-emetine-N′-ethoethylsulfate were synthesized.

2. All three of the quaternary derivatives of emetine possessed curare-like action on the striated musculature in the frog, rabbit, and mouse.

3. Quaternization of both nitrogens in the emetine molecule doubled the curarizing potency in comparison to the derivative in which only one of the ring nitrogens was quaternized.

4. N-methyl-emetine-N,N′-diethoethylsulfate was the most potent compound. It has approximately one-third the activity of *d*-tubocurarine chloride in the rabbit.

5. Comparative toxicity studies between emetine hydrochloride and N-methyl-emetine-N,N′-dimethoiodide showed a marked decrease in toxicity after quaternization of the tertiary nitrogen atoms.

6. The compound recovered from the urine of rats receiving N-methyl-emetine-N,N′-dimethoiodide showed chemical and pharmacologic reactions similar to the original quaternary derivative.

## REFERENCES

(1) Pyman, F. L., *J. Soc. Chem. Ind.*, **56**, 789(1937).
(2) Goodson, J. A., Goodwin, L. G., Gorvin, F. H., Goss, M. D., Kirby, K. S., Lock, J. A., Neal, R. A., Sharp, T. M., and Solomon, W., *Brit. J. Pharmacol.*, **3**, 49(1948).
(3) Brindley, W. H., and Pyman, F. L., *Chem. Soc., London*, **130**, 1067(1927).
(4) Karrer, P., *Ber.*, **49**, 2076(1916).
(5) Keller, O., and Bernhard, X., *Arch. Pharm.*, **263**, 404 (1925).
(6) Pyman, F. L., *J. Chem. Soc.*, **113**, 232(1918).
(7) Paolini, A., *Boll. soc. ital. biol. sper.*, **20**, 28(1945).
(8) Brown, A. Crum, and Fraser, T. R., *Trans. Roy. Soc. of Edinburgh*, **25**, 151, 693(1868–1869).
(9) Kimura, K. K., and Unna, K. R., *Federation Proc.*, **7**, 233(1948).
(10) Litchfield, J. T., Jr., and Fertig, J. W., *Bull. Johns Hopkins Hosp.*, **69**, 276(1941).
(11) Miller, Lloyd C., and Tainter, M. L., *Proc. Soc. Exptl. Biol. Med.*, **57**, 261(1944).
(12) Moulinier, R., *Zentr. Biochem. Biophys.*, **16**, 354 (1914).
(13) Kimura, K. K., Unna, Klaus, and Pfeiffer, Carl C., *J. Pharmacol Exptl. Therap.*, **95**, 149(1949).

# Studies on Alcohol-Soluble Fungistatic and Fungicidal Compounds. V. Evaluation of the Fungistatic and Fungicidal Properties of Antifungal Ointments *in Vitro**

By MILTON J. GOLDEN† and KURT A. OSTER†

**Many ointments designed for the therapy of dermatophytosis are labeled as "fungicidal," when in reality no known laboratory test method exists to substantiate such a claim. A proper method for the evaluation of the fungicidal potency of antifungal ointments has been deplorably lacking up to the present. The urgent need for such a laboratory test method cannot be over-emphasized. This investigation attempts to propose for the first time a suitable method, both reproducible and significant for the evaluation of the fungicidal potency of antifungal ointments *in vitro*.**

RECENTLY the existing test methods for *in vitro* evaluation of fungistatic and fungicidal compounds were reinvestigated and modified (1, 2). The results obtained with these methods were both significant and reproducible as long as the antifungal substance was in solution. The solvent used was 95 per cent ethyl alcohol. For the comparison of relative antifungal potencies of various chemicals this method was employed in an evaluation of quinones and quinolines (3).

From a practical standpoint it seemed worth while to determine the *in vitro* fungistatic and fungicidal properties of antifungal ointments, since a multitude of the therapeutic agents in the physician's armamentarium for the treatment of dermatophytosis have ointment bases as vehicle. Although an evaluation of the antifungal properties of ointments appeared highly useful, fungistatic or fungicidal strength of new compounds should be demonstrated only by the more accurate solution method.

A literature search revealed that the only practical test for the determination of fungistatic properties of ointments was described by Burlingame and Reddish in 1939 (4). No procedure for the determination of the fungicidal properties of ointments could be found. This report includes the authors' fungicidal *in vitro* test for antifungal ointments and a critical evaluation of the fungistatic and fungicidal properties of ten ointments popularly employed in clinical dermatophytosis therapy.

* Received July 9, 1949, from the research laboratories of McKesson & Robbins, Inc., Bridgeport, Conn.
† The authors wish to express their appreciation to Miss Kathleene M. Carroll for valuable technical assistance during the course of this investigation.

## EXPERIMENTAL

For the determination of fungistasis the agar cup plate method of Burlingame and Reddish (4) was utilized. The diameter of the cup was 1 cm. rather than the 2 cm. cup for testing fungistatic solutions. No dosage response curves were determined as was done with the liquids (1). The test organism was again *T. mentagrophytes* (Emmons 640). The fungistatic response was measured only at the concentration of the marketed preparation. The cleared zone of growth inhibition measured from the edges of the cup to the beginning of the growth zone, a radius segment, was the expression of fungistatic activity expressed in millimeters. It is claimed by some authors that the determination of fungistasis by this method expresses merely the penetration of the test substance through the agar medium and that it is not a true expression of fungistatic activity. This well-chosen objection does not hold entirely, however, in the light of the following simple experiment.

Whitfield Ointment containing 6% salicylic acid and 12% boric acid was placed in the agar cup of a plate seeded with *T. mentagrophytes*. After a period of five days in the incubator at 28° ± 1° the cleared zone around the agar cup was measured as 8 mm. Using the well-known blue-green color reaction of phenols with ferric chloride solution as an indicator for the presence of salicylic acid, a solution of ferric chloride was injected, with a 26-gauge hypodermic needle, into various areas of the agar plate. A positive color test indicating the presence of salicylic acid, and therefore its penetration, was obtained up to the outer rim of the 9-cm. diameter Petri dish despite the fact that the diameter of the cleared zone, including the cup, was only 26 mm. At best, such a test can provide only a rough estimate of the presence or absence of a chemical suitable to be traced by a single color reaction. It does, however, give some indication that penetration of the fungistatic substance alone does not determine the measurement of fungistasis by the agar cup plate method, but that the gradient of concentration of active material penetrating through the agar medium seems to be the limiting factor.

Any method designed to evaluate the fungicidal properties of an ointment should regard the following considerations: (*a*) The test culture must be sufficiently mature, approximately fifteen days old (2). (*b*) The contact time with the fungicide should be as short as possible. All conditions being equal, the brevity of the contact time and the concentration of the substance are the expressions of the relative fungicidal potency. A compound which is fungicidal in a short contact time and in low concentrations is a more potent fungicide than one which requires a prolonged contact time and/or a higher concentration. (*c*) The fungicide and its carrier (ointment, solvent) must be completely removed from the fungus culture after the contact time to prevent continuous fungistatic influences. (*d*) A suitable washing step should be devised which fulfills this requirement. (*e*) Wash solution controls with extended contact time should not show any fungicidal or fungistatic properties *per se*. (*f*) The wash solution should be easily removable from the fungus culture, and should not itself be an aid in promoting better penetration of the ointment into the fungus culture. (*g*) Proteins should be incorporated into the fungus medium to ascertain their inhibiting influences on certain fungicides. Most of these desired test steps have been previously investigated and reported (2).

In attempting to determine the fungicidal qualities of an antifungal ointment, one must consider all these conditions and the added complication of scrupulously removing the tenaciously adhering ointment from the agar plug.

The acetone-water washing step utilized in removing fungicidal solutions from the agar plug proved to be insufficient in the case of fungicidal ointments. It was necessary to add nonionic emulsifying agents to the solution, which by their surface tension depressing properties facilitated the removal of the adhering ointment from the agar plug. Inclusion of Span 20 (sorbitan monolaurate) and Tween 20 (sorbitan monolaurate polyoxyalkalenederivative) in a 30% acetone-water mixture, each at a concentration of 0.5% produced optimal results. This combination was found to be nonfungicidal in itself even after a fifteen-minute contact with the fungus culture.

In order to demonstrate the effectiveness of the washing solution in removing the ointment adhering to the fungus agar disk, the blue-green color reaction of phenols with ferric chloride solution was again utilized.

Two disks of a 15-day-old fungus culture were submerged in an ointment containing 6% salicylic acid. Subsequently one was washed for five minutes in the suggested detergent-acetone water mixture, whereas the second was treated with the broth-washing step as suggested by Burlingame and Reddish (4). No color development was observed with the first disk treated according to the proposed method for evaluating fungicidal ointments. The broth-treated disk, on the other hand, gave the characteristic blue-green color with the ferric chloride solution indicating the presence and possibly, continued fungistatic influence of salicylic acid.

In the fungicidal test for solutions a contact time of one minute was set up arbitrarily as desirable for the evaluation of relative fungicidal potency. In testing ointments this short contact time proved to be too stringent, and an arbitrary contact time of two minutes had to be considered. Most of the marketed preparations showed no fungicidal action with this prolonged contact. They were then tested at a five-minute contact time. This necessity for prolonging contact time to obtain fungicidal action is a definite manifestation of relative fungicidal weakness under the conditions of the described fungicidal *in vitro* test.

Consideration of these findings and observations has led to the adoption of the following method for evaluating fungicidal ointments, a method which has given reproducible and significant results.

## METHOD

Plates of Sabouraud's agar containing 10% sterile horse serum are streaked with a culture of *T. mentagrophytes* (Emmons 640) and grown at 28° ± 1° for fifteen days. On the day of the test the culture is cut into disks of 1 cm. diameter with a sterile cork borer and transferred with aseptic precautions to a large globule of ointment. The plug is buried deeply in the fungicidal ointment, and after two and/or five minutes' contact, transferred to 10 cc. of the special wash solution in a seeding tube preheated to 37°. The disk in the solution is shaken gently by hand for one minute to remove any remaining traces of ointment. From the wash solution (acetone, 30%, Span 0.5%, Tween 0.5%, distilled water 69%), the almost transparent-appearing culture block is then transferred to a tube containing 10 cc. of broth and gently shaken for two minutes. This procedure serves to free the matted culture of any water-soluble or miscible material still adhering from the washing solution. Following this broth-washing step, the disk is spread culture side down over the surface of a sterile Sabouraud's agar slant. These final slants are incubated at 28° ± 1° for three weeks and observed for growth. Control disks subjected to this treatment with ointments containing no fungicide grew luxuriously after five to seven days. With every test for fungicidal ointments a control of a similar nature must be run to assure proper conditions of the actual fungicidal test, using either a vanishing type or an oily type base. The wash solution had no fungistatic effect *per se*.

## RESULTS

This fungicidal test has been employed in evaluating various types of ointments currently used in the treatment of dermatophytosis.

Three separate tests were carried out for each ointment. Fungicidal action was considered established, when at least two out of three parallel tests showed no growth after three weeks' incubation. The results obtained with 10 antifungal ointments are presented in Table I along with the fungistatic evaluations (which were made the guide for their arrangement in sequence). As an additional control the 7 ointments listed as being not fungicidal at a five-minute contact time (Nos. 1–5, 8, and 9) were subjected to the same test procedures using the commonly recommended five-minute broth washing step rather than the acetone emulsifier mixture. None of the 7 ointments showed any growth with this test procedure, giving the false impression of being fungicidal when, in reality, they were merely fungistatic.

Many preparations now marketed and labeled "fungicidal" are expected to be found nonfungicidal *in vitro* when properly and adequately tested.

The same tests were applied in evaluating the role of the vehicle, oily base and vanishing-type base, in the fungicidal performance of three known active antifungal agents. Salicylic acid, undecylenic acid and propionic acid were chosen as examples and incorporated in various concentrations in either a 50% mixture of anhydrous lanolin and 50% petrolatum or in an ointment containing spermaceti, glycerylmonostearate (Tegacid) oil, and water. With a five-minute contact time salicylic acid proved to be nonfungicidal in concentrations as high as 25% using either type of ointment. Undecylenic acid was fungicidal in a 10% concentration in the oily vehicle and also in the water-oil emulsion, but in the latter only after the *p*H was adjusted to 6.7. No *p*H adjustment was found necessary to obtain a fungicidal effect at 10% concentration with undecylenic acid in the oily vehicle. Propionic acid was not fungicidal in a concentration of 15% in an oily vehicle. However, it was fungicidal at the same concentration in a water and oil emulsion. These evaluations demonstrate that as far as the fungicidal tests were concerned, differences existed between these two types of vehicles.

## DISCUSSION

A new method has been suggested for evaluating the fungicidal properties of antifungal ointments. However, as with all test methods, there are certain limitations to be considered, chiefly in the interpretation of the test results. The test is designed more to evaluate the fungicidal potency of the active ingredients of an ointment than to give a true clinical performance picture of the various combinations put into the ointments. This holds true especially when the addition of detergents to ointments is considered. Under the suggested test conditions, the addition of 2% triethanolamine shows a 5% undecylenic acid ointment to be fungicidal with five minutes' contact, whereas the ointment is not fungicidal under identical test conditions, when lesser quantities of detergent are added.

The disrepute into which the *in vitro* testing of antifungal compounds has fallen among clinicians is chiefly due to the fact that the testing has not been performed under logical laboratory conditions and that occasionally the active ingredient has been augmented by substances which were designed to "beat" the test rather than to offer actual synergistic or otherwise contributory antifungal properties. The described *in vitro* test for antifungal compounds should serve only as a comparative evaluation of the fungistatic and fungicidal properties of one particular compound. The real value of additional substances designed to enable the original active ingredient to "test" more satisfactorily has to be proved by properly designed additional testing or by actual clinical trial.

The weakness or strength of an antifungal compound will then be evaluated by its own merit. If the compound shows good test performances only under certain specific conditions, which may or may not be present on the human skin, the test results should be considered with the utmost caution and

TABLE I.—FUNGICIDAL AND FUNGISTATIC ACTIVITY OF 10 ANTIFUNGAL OINTMENTS

| Base | Active Ingredients According to Label | Fungicidal[a] (After Contact Time of) 2 Min. | 5 Min. | Fungistatic (Clearance, Mm.) |
|---|---|---|---|---|
| Vanishing cream | Trimethyl cetyl ammonium pentachlorphenate, 2.2% | + | + | 7 |
| Oil | 6% Salicylic acid and 12% benzoic acid (Whitfield's Ointment) | + | + | 8 |
| Vanishing cream | Undecylenic acid, 5%, and zinc undecylenate, 20% | + | + | 8 |
| Oil | [b] Salicylic acid, tincture of Metaphen, hydroxyquinoline, sulfur, and menthol | + | + | 10 |
| Oil | [b] Salicylic acid, Benzoic acid, and thymol | + | + | 11 |
| Vanishing cream | Undecylenic acid, 5% Zinc stearate, 13% Triethanolamine, 2% | + | − | 13 |
| Vanishing cream | Sodium propionate, 12.3%<br>Propionic acid, 2.7%<br>Sodium caprylate, 10%<br>Zinc caprylate, 5%<br>Dioctyl sodium sulfosuccinate, 0.1%<br>N-propyl alcohol, 10% | + | − | 17 |
| Vanishing cream | Salicylic acid, 2%<br>Benzoic acid, 2%<br>Secondary amyltricresols, 0.1%<br>Ortho-hydroxyphenylmercuric chloride, 0.1% | + | + | 18 |
| Vanishing cream | [b] Benzoic acid, zinc stearate, boric acid, zinc oxide, alcohol, 20% | + | + | 30 |
| Vanishing cream | Hydroxyquinoline benzoate, 3% | − | − | Clears plate completely |

[a] Symbols: + growth, − no growth after three weeks' incubation.
[b] No percentages of content given.

should not be generalized. Examples of these specific requirements are, among others, extremely high concentration of an active ingredient, addition of detergents and maintenance of a certain *p*H. It has to be proved separately that these additional features are maintained under actual treatment conditions. The suggested fungistatic or fungicidal *in vitro* tests should not be used to give an answer to these points.

A similar problem, test-wise, is constituted by the metal salts of active ingredients which have low solubilities. It is claimed that their antifungal action cannot be demonstrated by the usual tests. It is further stated that these salts slowly release the active ingredient *in vivo*, so that an effective concentration is present at all times. The therapeutic desirability of such alleged slow release of the active ingredient in a topically applied ointment is open to question. The actual release of the active ingredient on contact with the skin *in vivo* in contrast to its proved stability on contact with agar *in vitro* should be demonstrated by specially designed tests.

It may be postulated that as far as therapeutic performance is concerned an ointment containing an active ingredient which completely clears the test plate on fungistatic evaluation and which is fungicidal with a two-minute contact at a low concentration of the active ingredient may be expected to be clinically efficacious, provided, of course, that the active ingredient is not a primary irritant or a skin sensitizer. The superiority of such an ointment will also be shown test-wise, in that it will not have to rely on artificially created conditions such as the addition of detergents, maintenance of *p*H, or an extremely high concentration to give good test results.

## SUMMARY

1. A new method is suggested for the evaluation of the fungicidal properties of ointments, recommended for the treatment of dermatophytosis.

2. The addition of nonionic emulsifying agents to an acetone-water washing solution facilitates the removal of the adhering ointment from the culture disk.

3. The fungicidal and fungistatic activities of 10 antifungal ointments have been evaluated.

4. An ideal ointment is defined as one that completely clears the test plate on fungistatic evaluation and which is fungicidal at a two-minute contact time at a relatively low concentration.

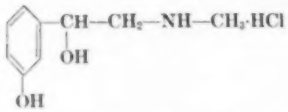
## REFERENCES

(1) Oster, K. A., and Golden, M. J., THIS JOURNAL, **36**, 283 (1947).
(2) Golden, M. J., and Oster, K. A., *ibid.*, **36**, 359(1947).
(3) Oster, K. A., and Golden, M. J., *ibid.*, **37**, 429(1948).
(4) Burlingame, E. M., and Reddish, G. F., *J. Lab. Clin. Med.*, **24**, 765(1939).

# Colorimetric Determination of Phenylephrine (Neo-Synephrine) in Pharmaceutical Products*

By M. E. AUERBACH†

**Phenylephrine may be converted to a highly colored compound by coupling with diazotized *p*-nitroaniline. Photometric determination of the color at 495 mμ constitutes a convenient assay method for the drug in pharmaceutical preparations.**




PHENYLEPHRINE N. N. R. (Neo-Synephrine) is a sympathomimetic amine in general use, available in a growing number of pharmaceutical preparations. As yet, however, published information which might be of value to analysts is rather scanty. It is the purpose of this communication to describe a simple assay method applicable to most of these various preparations.

The presence of the hydroxyphenyl nucleus in phenylephrine makes possible a variety of analytical approaches. Thus, the absorption spectrum of the compound shows a small peak at 273 mμ, the molar absorbency index[1] ($a_M$) being about 1800. Use has been made of this property[2] to assay certain formulations. The bromometric assay method of the U. S. P. for phenol is also useful for some uncomplicated mixtures. However, in the course of examining numerous experimental as well as commercial formulations, a more generally satisfactory approach has been to measure the intensity of the azo color produced by coupling phenylephrine with diazotized *p*-

* Received May 23, 1949, from the Sterling-Winthrop Research Institute, Rensselaer, N. Y.
† The author is indebted to Miss Eleanor Angell for technical assistance.

[1] The spectrophotometric nomenclature used in this paper conforms with the suggestions in the Bureau of Standards Letter Circular 857, of May 19, 1947, entitled "Terminology and Symbols for Use in Ultraviolet, Visible, and Infrared Absorptometry."
[2] Work by Dr. Eugene H. Wells, Winthrop-Stearns, Inc., Myerstown, Pa.

nitroaniline. The proper conditions for carrying out the test will be described in detail. The visible range absorption spectrum for the azo color produced is shown in Fig. 1.

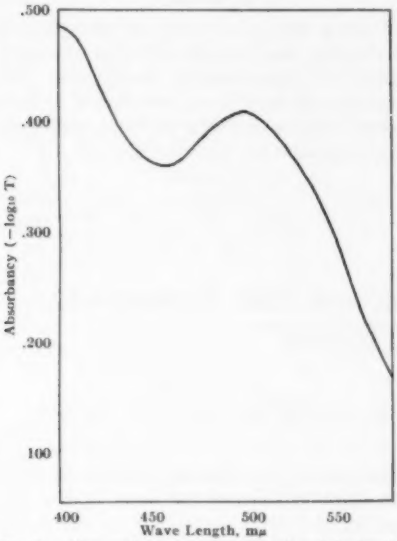



Fig. 1.—Absorption spectrum of colored derivative of phenylephrine.

## EXPERIMENTAL

**Required Reagents.**—

1. Sodium tetraborate decahydrate, 5% *w/v*.
2. Sodium hydroxide, 10% *w/v*.
3. Diazo solution. Dissolve 30 mg. recrystallized *p*-nitroaniline in 2 cc. of dilute (6 *N*) hydrochloric acid by warming. Chill in ice, add 0.5 cc. of 7% (*w/v*) sodium nitrite solution. After two minutes add 100 cc. cold distilled water and 1 cc. of 4% sulfamic acid. Mix. Keep in ice bath until ready to use. Even when kept cold, reagent more than three hours old should not be used.
4. Standard solution. Dissolve exactly 100 mg. pure dry Neo-Synephrine Hydrochloride in exactly 100 cc. water. By appropriate dilution with water, prepare a working standard containing 10 μg. (0.01 mg.) drug per cc.

**Method: Setting Up the Standard Graph.**—In each of five test tubes graduated at the 10-cc. level, take 0 cc., 1 cc., 2 cc., 3 cc., and 4 cc., respectively, of the working standard. Dilute each with water to approximately 5 cc. Add to each, 1 cc. of the 5% borax solution and mix. Add to each, 0.5 cc. of the diazo reagent, mix, and let stand at room temperature for ten minutes. Add to each tube 1 cc. of the 10% caustic solution, dilute with water exactly to the 10-cc. mark, and mix. Using a photoelectric colorimeter and a filter whose maximum transmittance is at about 495 mμ, set the instrument to 100% transmittance, using the reagent blank solution. Determine the percentage transmittancy of each of the standard test solutions. These values, when plotted against concentration on semilog paper, will form a straight line. Table I records the data for a representative series of standards.

**Assay of Samples.**—Solutions of the drug in water, or in water and alcohol, should be diluted to a concentration of about 5 μg. per cc. Five cubic centimeters (25 μg.) should then be taken for the assay, which is performed as already directed. Dry preparations have only to be dissolved in water and diluted in the same way. Tinting agents, such as are used in elixirs, cause no appreciable error, because of the extreme attenuation of dye after proper sample dilution. Other possible concomitant substances, such as penicillin, tetracaine, chlorobutanol and quaternary ammonium germicides, cause no interference. The esters of *p*-hydroxybenzoic acid, in which the position *para* to the phenolic hydroxyl is already occupied by a stable group, do not couple under the conditions of the test. Similarly, no color is formed with procaine. However, sulfathiazole does couple, and consequently mixtures of phenylephrine and sulfathiazole cannot be assayed by the proposed test as given. The presence of large amounts of Sulfamylon (also known as Marfanil, Mesudin, or Homosulfanilamide) results in an erroneously high value for phenylephrine. In such mixtures, however, phenylephrine may be assayed colorimetrically after quantitative removal of Sulfamylon. The details of this procedure will be presented, it is hoped, in a separate paper.

TABLE I.—RELATIONSHIP BETWEEN CONCENTRATION OF PHENYLEPHRINE AND PERCENTAGE TRANSMITTANCY OF COLORED DERIVATIVE

| Micrograms in 10 cc. | Transmittancy, % |
|---|---|
| 10 | 81.1 |
| 20 | 64.0 |
| 30 | 49.8 |
| 40 | 38.6 |
| 50 | 30.4 |

One common preparation, containing 0.25% phenylephrine in a nasal emulsion supported by gum acacia, requires some preliminary handling. The following scheme has been found satisfactory. Mix the sample thoroughly. Take 0.3 to 0.5 Gm.,

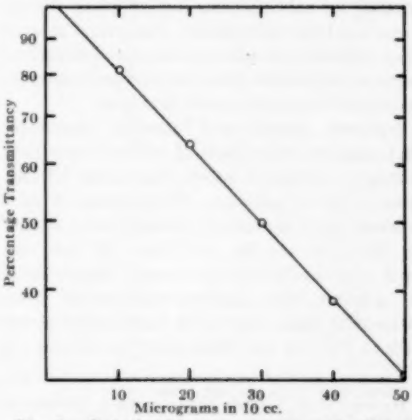



Fig. 2.—Relationship between concentration of phenylephrine and percentage transmittancy of colored derivative

weighed exactly, in a 50-cc. centrifuge tube. Add 20 cc. 95% alcohol and stir to break up lumps. Place in a water bath at 70° for twenty minutes. Stir several times, so that the precipitated acacia comes down as a fine powder. Centrifuge while still warm, and decant carefully into a 250-cc. volumetric flask. Stir the residue in the centrifuge tube with 5 cc. fresh 95% alcohol, centrifuge again, and decant the alcohol into the volumetric flask. Add exactly 10 cc. of carbon tetrachloride to the volumetric flask, then dilute to 250 cc. with water and shake thoroughly. Let the layers separate. Clear a portion of the aqueous phase by filtration or centrifugation. Take 5 cc. of the clarified solution for the assay given. The function of the carbon tetrachloride is to remove and dissolve aromatic oils. The phenylephrine is all contained in the 240 cc. of aqueous phase, and results should be calculated accordingly.

## SUMMARY

Working details have been presented for the colorimetric assay of phenylephrine (Neo-Synephrine) in pharmaceutical preparations. The assay depends upon the measurement of the color produced by coupling phenylephrine with diazotized *p*-nitroaniline.

---

# The Effect of Crystal Size on the Estrogenic Activity of Theelin*,†

By A. SIMOND, K. M. LINDQUIST, F. H. TENDICK, and L. W. ROWE

**Duration estrogenic tests have been made over a period of about three years on suspensions of Theelin in which the size of the crystals varied considerably. It is shown by these animal tests that crystal size definitely influences the length of time during which estrogenic stimulation can be demonstrated.**

THE desire for a moderate, continuous estrogenic stimulation from a single dose of a suitably active estrogen has resulted in the suggestion of many dosage forms and many methods of administration. From the original crude and weak aqueous extracts to the pellets of Theelin[1] crystals for subcutaneous implantation, the advance has been tremendous. However, the latter offer difficulties of administration and sometimes cause local disorders even when properly administered and so are only rarely used now.

Richards, Spruth, and Russell (1) concluded that aqueous suspensions of estrone were more lasting in estrogenic action than either oil solutions or oil suspensions. Preparations of three different sized crystals of estradiol were studied by Miescher, Gasche, and Frey (2), but they used only medium-sized crystals, suspended in oil or water, when working with estrone. Supplementing these reports we have experimented with rats for the past three years on the effect of crystal size on the duration of estrus, resulting from single injection of Theelin in aqueous suspension.

Using adult female, ovariectomized rats as the test animals and the basic principles of the Allen-Doisy method (3, 4), the duration of estrus produced by single, massive subcutaneous injections of aqueous suspensions of Theelin crystals of varying size was determined for individual animals in small groups and then averaged. Injections were made in the dorsal area with 18-gauge needles to insure free passage of the largest crystals, and the total volume injected varied from 0.20 cc. to 1.00 cc. with dosage ranging from 5000 to 20,000 I. U. Vaginal smears were taken for microscopic examination only once each day to avoid the remote possibility of inducing false positive reactions.

A few tests were made on oil solutions of Theelin and these confirmed the findings of Richards, Spruth, and Russell (1). Also a few tests were made on α-estradiol benzoate both in oil solution and in aqueous suspension. The size of the Theelin crystals is given as "small" if nearly all the crystals were 10 microns or less in length. "Medium size" means that most of the crystals (50 to 75 per cent) were 25 or 30 microns in length while "large size" means that 50 per cent or more of the crystals were from 50 to 150 microns in length. In all suspensions there were a few small crystals and also a small percentage of the larger crystals. The size mentioned will be the predominating one (50 per cent or more).

* Received April 30, 1949, from the Research Laboratories of Parke, Davis & Co., Detroit, Mich.
Presented to the Scientific Section, A. PH. A., Jacksonville meeting, April, 1949.
† Acknowledgment is made to Dr. D. A. McGinty for some of the physical data on Theelin crystal size of the aqueous suspension preparations used.
[1] Parke, Davis & Co. trade name for estrone.

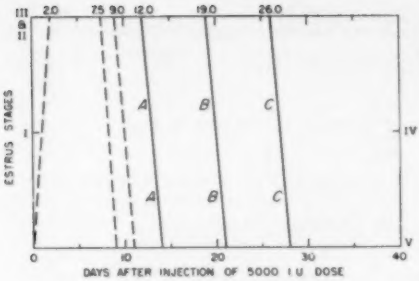



Figure 1.

Broken lines = oil soln.; ave. 5.5 and 7 days.
*A* = small crystals; ave. 10 days.
*B* = medium crystals; ave. 17 days.
*C* = large crystals; ave. 24 days.

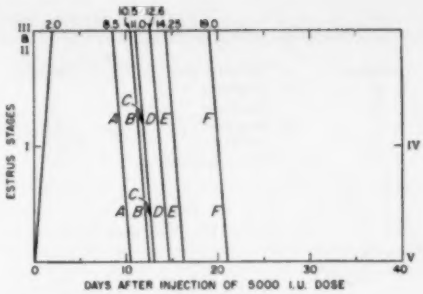



Figure 2.

*A* = oil soln. α-estradiol benz. 0.166 mg.; ave. 6.5 days.
Also *A* = aq. susp. small crystals *C;* ave. 6.5 days.
*B* = aq. susp. medium crystals *B;* ave. 8.5 days.
*C* = aq. susp. small and medium crystals *D;* ave. 9 days.
*D* = aq. susp. α-estradiol 0.2 to 0.5 mg.; ave. 10.6 days.
*E* = aq. susp. medium crystals *A;* ave. 12.25 days.
*F* = aq. susp. medium crystals. P. D. & Co.; ave. 17 days.

Detailed results are summarized and presented in three tables. The figures serve to emphasize the important points.

## DISCUSSION

In Fig. 1, a graphic contrast is shown between the shorter action of a single dose of Theelin in oil solution (5000 I. U. or 0.5 mg. producing full estrus which lasted an average of 5.5 and 7 days in two different tests) and the same dose of Theelin as an aqueous suspension of three crystal sizes. It will be noted that an average of 2 days (48 hours) was required by all the doses given to go from the resting stage (Stage V) to full estrus (Stages II and III). It also averaged about two days for the vaginal smear to pass through Stage IV and reach the resting stage after the full effect of the stimulation was over. The average effect of the crystals of different size was as follows: for crystals of small size (10 microns or less) a duration of 10 days; for those of medium size (up to 25 or 30 microns) a duration of 17 days; and for those of large size (50 to 150 microns) a duration of 24 days.

In Fig. 2, the effect of four aqueous suspensions of estrone (*A* averaging 12.25 days, *B* averaging 8.5 days, *C* averaging 6.5 days, *D* averaging 9

TABLE I.—THEELIN AQUEOUS SUSPENSION

| Crystal Size | Rats | Dose, I. U. (1 injection) | Estrus, Min. | Duration, Max. | Av. (Days) |
|---|---|---|---|---|---|
| Small | 10 | 5,000 | 6 | 17 | 9.5 |
| Small | 10 | 10,000 | 10 | 14 | 11 |
| Small | 10 | 5,000 | 8 | 14 | 11 |
| Small | 10 | 5,000 | 6 | 14 | 9 |
| Small | 10 | 5,000 | 7 | 14 | 10 |
| Small | 10 | 5,000 | 9 | 12 | 10.5 |
| Small | 5 | 20,000 | 11 | 20 | 16 |
| Small | 10 | 5,000 | 7 | 16 | 11 |
| Medium and large | 10 | 5,000 | 17 | 35 | 27 |
| Medium and large | 5 | 10,000 | 29 | 36 | 34 |
| Medium and large | 10 | 5,000 | 17 | 31 | 23 |
| Medium and large | 5 | 10,000 | 21 | 35 | 27 |
| Medium | 10 | 5,000 | 10 | 24 | 16 |
| Medium | 10 | 5,000 | 12 | 25 | 18 |
| Medium | 10 | 5,000 | 14 | 18 | 17 |
| Medium | 5 | 5,000 | 13 | 20 | 16 |
| Medium | 10 | 5,000 | 15 | 32 | 23.5 |
| Medium | 10 | 5,000 | 19 | 22 | 20 |
| Medium | 10 | 5,000 | 16 | 19 | 18 |
| Medium | 10 | 5,000 | 14 | 20 | 17.5 |
| Medium | 5 | 5,000 | 8 | 17 | 12 |
| Medium | 10 | 5,000 | 8 | 17 | 11 |
| Large | 10 | 5,000 | 15 | 27 | 23 |
| Large | 10 | 5,000 | 15 | 30 | 23 |
| Large | 5 | 5,000 | 16 | 30 | 25 |

TABLE II.—OTHER ESTRONE AQUEOUS SUSPENSIONS

| Product | Crystal Size | Rats | Dose, I. U. (1 injection) | Estrus, Min. | Duration, Max. | Av. (Days) |
|---|---|---|---|---|---|---|
| A | Medium | 8 | 5000 | 8 | 16 | 14 |
| B | Medium | 10 | 5000 | 5 | 14 | 8.5 |
| C | Small | 10 | 5000 | 5 | 8 | 6.5 |
| A | Medium | 10 | 5000 | 7 | 16 | 10.5 |
| D | Small medium | 10 | 5000 | 8 | 11 | 9 |

TABLE III.—THEELIN IN OIL SOLUTION AND α-ESTRADIOL PREPARATIONS

| Product | Form | Rats | Dose, I. U. (1 injection) | Estrus, Min. | Duration, Max. | Av. (Days) |
|---|---|---|---|---|---|---|
| Theelin | 1 mg./cc. oil | 10 | 5,000 | 6 | 8 | 7 |
| Theelin | 1 mg./cc. oil | 5 | 10,000 | 6 | 10 | 8 |
| Theelin | Castor oil sol. | 8 | 5,000 | 7 | 14 | 11 |
| Theelin | Peanut oil sol. | 8 | 5,000 | 4 | 7 | 5.5 |
| α-Estradiol | Oil sol. | 5 | 0.5 cc. or 0.833 mg. | 13 | 20 | 15 |
| Benzoate | Oil sol. | 5 | 0.1 cc. or 0.166 mg. | 5 | 9 | 6.5 |
| Benzoate | Oil sol. | 8 | 0.5 cc. or 0.833 mg. | 8 | 23 | 17 |
| α-Estradiol | Aq. susp. | 10 | 0.2 cc. or 5000 I. U. | 5 | 6 | 5.5 |
| α-Estradiol | Aq. susp. | 10 | 0.25 cc. or 0.25 mg. | 6 | 13 | 8 |
| α-Estradiol | Aq. susp. | 10 | 0.5 cc. or 0.5 mg. | 6 | 19 | 12 |
| α-Estradiol | Aq. susp. | 5 | 0.2 cc. or 5000 I. U. | 15 | 21 | 17 |

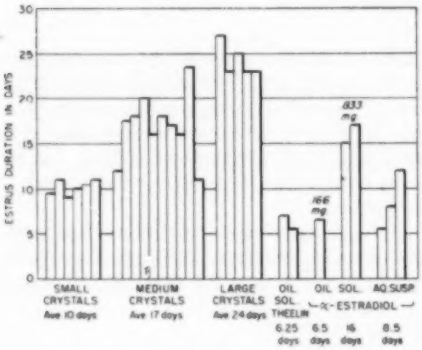



Figure 3.

days) is shown in comparison with our suspension of medium sized Theelin crystals averaging 17 days. Also the action of an oil solution of α-estradiol benzoate (6.5 days) and that of an aqueous suspension of α-estradiol (averaging 10.6 days) is given.

In Fig. 3 another form of graphic presentation shows the individual results obtained on groups of 10 rats each, which gave the rounded averages on different sized crystals and also α-estradiol preparations and Theelin in oil solution. The differences obtained with the three sizes of crystals particularly are very striking in this form of presentation. Certainly in these rat tests the α-estradiol preparations, both oil solution and aqueous suspension, show up poorly in comparison with the medium and large-sized Theelin crystals unless a very large dose (0.833 mg.) of estradiol is given.

## SUMMARY

1. The size of the Theelin crystals in an aqueous suspension is very important in determining the duration of estrogenic effect as shown by tests upon ovariectomized rats. If most of the crystals are small (10 microns or less) the average duration of estrogenic stimulation (ten days) is less than half that produced when the same dose (5000 I. U.) of a suspension containing large crystals (50 per cent or more being 50 to 150 microns) is given (twenty-four days).

2. The lasting action of Theelin in oil solution in tests on rats is slightly less than that of an aqueous suspension containing only small crystals.

3. α-Estradiol benzoate in oil solution and estradiol crystals in aqueous suspension are less lasting in their estrogenic effect than small Theelin crystals in aqueous suspension.

## REFERENCES

(1) Richards, R. K., Spruth, H. C., and Russell, M. K. *Proc. Soc. Exptl. Biol. Med.*, **48**, 400(1941).
(2) Miescher, K., Gasche, P., and Frey, H., *Helv. Physiol et Pharmacol. Acta*, **2**, 515(1944).
(3) Allen, E., and Doisy, E. A., *J. Am. Med. Assoc.*, **81**, 819(1923).
(4) Kahnt, Lydia C., and Doisy, E. A., *Endocrinology*, **12** 760(1928).

# Fungistatic and Bacteriostatic Studies on Some Alkynoic Acids*

By CHARLES D. COX†, J. C. FORBES, and J. H. WOTIZ‡

**The results of a study of the fungistatic and bacteriostatic actions of several alkynoic acids are reported. It has been demonstrated that Δ 9,10-hendecynoic acid possesses considerable fungistatic activity, although slightly less than that of undecylenic acid.**

THE chief purpose of this investigation was to study the effect, if any, of the position of unsaturation in the fatty acid chain upon fungistatic activity. The greater activity of olifenic acids over their aliphatic homologs, as reported by Peck and Rosenfeld (1) and Wyss and co-workers (2), was apparently due to the double bond. Wyss and co-workers (2) state that the position of unsaturation was without effect on activity, but their data pertaining to this subject was limited to a comparison of only 2-hendecenoic and 10-hendecenoic acids. A review of the literature has failed to reveal further work on this subject. Since preliminary work indicated that the fungistatic activity of the triple bond acid Δ 9,10-hendecynoic acid compared favorably with that of undecylenic acid, and because of the availability of the complete series of isomeric *n*-octynoic acids prepared by one of us (J. H. W.) it was felt that a study of this series of acids should show clearly any effect of the position of unsaturation on either fungistatic or bacteriostatic activity.

## EXPERIMENTAL

### Methods

**Fungistatic Activity.**—The test medium consisted of 1.5% agar, 0.5% glucose, and 1% peptone. The fatty acid was added to hot melted medium in a concentration of 50 mg./100 ml. and successively lower concentrations were prepared by making appropriate dilutions of the 50 mg./100-ml. portion in melted media.

All dilutions, as well as media without fatty acid for normal growth controls, were adjusted to the appropriate *p*H, tubed in 5-ml. amounts, autoclaved, and slanted. Inoculum was prepared by removing the growth from 3 agar slants and grinding it by means of a sterile mortar and pestle with a small amount of sterile alundum and saline. This was then diluted with sterile saline to a final volume of 20 ml. Inoculum consisted of 0.50 ml. of this suspension per slant. All tubes were incubated at room temperature for two weeks and read. All determinations were in triplicate and all experiments were repeated at least once, with results showing good agreement. Fungus cultures were obtained from the departmental stock collection.

**Bacteriostatic Activity.**—The test medium consisted of 1% Difco Proteose-Peptone No. 3, 0.5% glucose, and 0.4% NaCl. Fatty acid concentrations were prepared in this broth medium by the same method used with the test medium for fungistatic activity. All fatty acid dilutions, as well as broth without fatty acid for normal growth controls, were adjusted to *p*H 7.0, tubed in 5 ml. amounts and autoclaved. Inoculum consisted of 0.1 ml. per tube of a $^1/_{1000}$ dilution in sterile saline of a twenty-four-hour culture of the organism in the test medium. This inoculum was found to give an initial count of from 50,000 to 100,000 organisms/ml. Growth was measured after twenty-four hours incubation at 37° by turbidity measurements using the Klett-Summerson photoelectric colorimeter with a blue filter. All figures in the tables are based upon the averages of tubes inoculated in triplicate. All experiments were repeated at least twice, with results showing good agreement. The bacterial cultures were obtained from the departmental stock collection.

### Comparative Activity of the Isomers of *n*-Octynoic Acid

**Bacteriostatic Activity.**—Results are shown in Table I. It can be seen that some difference exists in activity against the various bacteria depending upon the position of the triple bond. All of the isomers showed some activity against all the bacteria tested, the differences in activity against any one organism being greater between some isomers than between others. The Δ 2,3-isomer in general was the more highly active one against *Proteus*, *Salmonella typhi*, and *Staphylococcus aureus* and showed some activity against *Shigella paradysenteriae Flexner Z.* and the coliform culture.

**Fungistatic Activity.**—Results are shown in Table II. The greatest activity against the fungi tested as a group seemed to be with the Δ 4,5, Δ-5,6, and Δ 6,7 isomers of octynoic acid. From a comparative standpoint, the greatest fungistatic activity observed was the inhibition of *Histoplasma capsulatum* by the Δ 7,8 isomer. Of considerable interest was the fact that against the fungi as a group the Δ 2,3 isomer was the least active, in no instance showing complete inhibition of fungal growth in 50 mg./100 ml. concentration.

In view of the fact that no studies have been previously reported on the fungistatic and bacteriostatic action of triple bond fatty acids, comparative data obtained on Δ 9,10-hendecynoic acid[1] and undecylenic acid[2] are presented at the present time

* Received June, 1949, from the Departments of Bacteriology and Biochemistry, Medical College of Virginia, Richmond.
† Present address: Department of Bacteriology, Pennsylvania State College.
‡ Department of Chemistry, University of Pittsburgh.

[1] Furnished by Charles C. Haskell & Co., Richmond, Va.
[2] Eastman Kodak Co., Rochester, N. Y.

TABLE I.—COMPARATIVE BACTERIOSTATIC ACTIVITY OF ISOMERS OF *n*-OCTYNOIC ACID

| Isomer | *Salmonella typhi* | Coliform | *Proteus* sp. | *Shigella paradys. Flexner Z.* | *Staphylococcus aureus* |
|---|---|---|---|---|---|
| | Inhibition at 50 Mg./100 Ml. Fatty Acid Concentration, % | | | | |
| $C_5H_{11}C{\equiv}CCO_2H$ | 61 | 38 | 42 | 40 | 48 |
| $C_4H_9C{\equiv}CCH_2CO_2H$ | 47 | 26 | 39 | 20 | 46 |
| $C_3H_7C{\equiv}C(CH_2)_2CO_2H$ | 54 | 36 | 23 | 31 | 26 |
| $C_2H_5C{\equiv}(CH_2)_3CO_2H$ | 49 | 37 | 9 | 35 | 18 |
| $CH_3C{\equiv}C(CH_2)_4CO_2H$ | 51 | 42 | 11 | 49 | 14 |
| $HC{\equiv}C(CH_2)_5CO_2H$ | 46 | 39 | 20 | 23 | 28 |

TABLE II.—COMPARATIVE FUNGISTATIC ACTIVITY OF ISOMERS OF *n*-OCTYNOIC ACID

| Fatty Acid | *p*H | *Trichophyton mentagrophytes* | *Epidermophyton floccosum* | *Microsporum canis* | *Blastomyces dermatitidis* | *Histoplasma capsulatum* | *Sporotrichum schenkii* |
|---|---|---|---|---|---|---|---|
| | | Mg./100 Ml. Required for Complete Inhibition | | | | | |
| $C_5H_{11}C{\equiv}CCO_2H$ | 6.0 | >50 | >50 | >50 | >50 | >50 | >50 |
| | 7.2 | >50 | >50 | >50 | >50 | >50 | >50 |
| $C_4H_9C{\equiv}CCH_2CO_2H$ | 6.0 | >50 | >50 | >50 | 10–20[a] | 1–10 | >50 |
| | 7.2 | >50 | >50 | >50 | >50 | 20–50 | >50 |
| $C_3H_7C{\equiv}C(CH_2)_2CO_2H$ | 6.0 | 20–50 | 20–50 | 20–50 | 1–10 | 1–10 | 20–50 |
| | 7.2 | >50 | >50 | >50 | 20–50 | 20–50 | >50 |
| $C_2H_5C{\equiv}C(CH_2)_3CO_2H$ | 6.0 | 20–50 | 20–50 | 20–50 | 10–20 | 10–20 | 20–50 |
| | 7.2 | >50 | >50 | >50 | >50 | >50 | >50 |
| $CH_3C{\equiv}C(CH_2)_4CO_2H$ | 6.0 | 20–50 | 10–20 | 20–50 | 1–10 | 1–10 | >50 |
| | 7.2 | >50 | >50 | >50 | 20–50 | 10–20 | >50 |
| $HC{\equiv}C(CH_2)_5CO_2H$ | 6.0 | >50 | 20–50 | >50 | 20–50 | >1 | >50 |
| | 7.0 | >50 | >50 | >50 | >50 | 1–10 | >50 |

[a] This means complete inhibition at 20 mg./100 ml. but not at 10 mg./100 ml. concentration.

These acids are comparable except that the former has a triple bond between carbon atoms 9 and 10, while the latter has a double bond between carbons 10 and 11. Undecylenic acid has been extensively studied and is generally recognized as an active fungistatic and fungicidal agent.

### Comparative Activity of Δ 9,10-Hendecynoic and Undecylenic Acids

**Bacteriostatic Activity.**—Results are shown in Table III. It can be seen that undecylenic acid was generally slightly more active against *Salmonella typhi* and *Staphylococcus aureus* than Δ 9,10-hendecynoic acid. However, undecylenic acid was actually stimulatory in concentrations of 50 mg./100 ml. to the coliform culture and *Shigella paradysenteriae Flexner Z.* Lower concentrations, however, showed some inhibition. In comparison, the Δ 9,10-hendecynoic acid showed some inhibition in 50 mg./100 ml. concentration with all five organisms tested. Higher concentrations were not used because of the limiting solubilities of these fatty acids. These experiments have been repeated several times and in all cases undecylenic acid in 50 mg./100 ml. concentration was definitely stilulatory to the coliform and Shigella cultures. The reason for this is not known.

**Fungistatic Activity.**—Results are shown in Table IV. Undecylenic acid was consistently slightly more active against the various fungi than Δ 9,10-hendecynoic acid. Of particular interest was the quite marked inhibition of *Histoplasma capsulatum* and *Blastomyces dermatitidis* by undecylenic acid at *p*H 7.0, and it is felt that this finding may warrant further investigation.

## DISCUSSION

It is apparent that the position of the triple bond played some part in the differences in activity of the isomeric *n*-octynoic acids. All of the isomers showed some inhibitory activity against the bacteria tested. Differences in activity with any one organism were more marked between some isomers than between others. Comparatively speaking, the Δ 2,3 isomer was the more active of the isomers against *Proteus sp.*, *Salmonella typhi*, and *Staphylococcus aureus* and showed some activity against the coliform culture and *Shigella paradysenteriae Flexner Z.* However,

TABLE III.—COMPARATIVE BACTERIOSTATIC ACTIVITY OF Δ 9,10-HENDECYNOIC AND UNDECYLENIC ACIDS[a]

| Fatty Acid | Mg./100 Ml. | *Salmonella typhi* | Coliform | *Proteus* sp. | *Shigella para. Flexner Z.* | *Staphylococcus aureus* |
|---|---|---|---|---|---|---|
| Δ 9,10-Hendecynoic acid | 0 | 134 | 245 | 189 | 150 | 159 |
| | 10 | 96 | 215 | 170 | 125 | 103 |
| | 20 | 84 | 197 | 165 | 130 | 97 |
| | 50 | 65 | 168 | 173 | 95 | 81 |
| Undecylenic acid | 0 | 135 | 251 | 211 | 154 | 153 |
| | 10 | 61 | 184 | 180 | 101 | 78 |
| | 20 | 44 | 227 | 184 | 129 | 66 |
| | 50 | 54 | 345 | 238 | 260 | 41 |

[a] The figures represent the average of turbidity readings on triplicate tubes.

TABLE IV.—COMPARATIVE FUNGISTATIC ACTIVITY OF Δ 9,10-HENDECYNOIC AND UNDECYLENIC ACIDS

| Fatty acid | pH | *Trich. mentagrophytes* | *Epiderm. floccosum* | *M. canis* | *Bl. dermatitidis* | *Histoplasma capsulatum* | *Sporotrichum schenkii* |
|---|---|---|---|---|---|---|---|
| | | Mg./100 Ml. Required for Complete Inhibition | | | | | |
| Δ 9,10-Hendecynoic acid | 5.9 | 5–10 | 2– 5 | 2– 5 | 1– 2 | 10 | 2– 5 |
| | 7.0 | 20–50 | 20–50 | 20–50 | 20–50 | 5–10 | 50 |
| Undecylenic acid | 5.9 | 5–10 | 1– 2 | 2– 5 | 0.1 | 0.1–0.2 | 5–10 |
| | 7.0 | 10–20 | 5–10 | 5–10 | 2– 5 | 2– 5 | 20–50 |

the differences were minor in some instances. It is interesting that the Δ 2,3 isomer was the least active isomer against the fungi, giving complete inhibition in no instance in 50 mg./100 ml. concentration. It is realized that had the method of measuring inhibition of the fungi been the same as that used with the bacteria, some fungistatic activity may have been detected with the Δ 2,3 isomer. Against the fungi as a group, the Δ 4,5, Δ 5,6, and Δ 6,7 isomers were the most active.

The eleven carbon chain triple bond unsaturated fatty acid, Δ 9,10-hendecynoic acid, showed considerable fungistatic activity, although it was consistently slightly less active than the eleven carbon chain double bond unsaturated fatty acid, undecylenic acid, used in comparison. Of further interest to us was the fact that a 50 mg./100 ml. concentration of undecylenic acid was stimulatory to two of the five bacteria tested, whereas the Δ 9,10-hendecynoic acid showed at least some activity in all concentrations tested against all five bacteria.

It is felt that the triple bond unsaturated fatty acids warrant further *in vitro* and *in vivo* investigations as possible therapeutic agents in dermatophytic infections. This study shows Δ 9,10-hendecynoic acid to be only slightly less fungistatic than undecylenic acid, which is widely used at the present time as a chemotherapeutic agent. In light of the difference in activity of the isomers of *n*-octynoic acid, it would be interesting to study the activities of all the structural isomers of hendecynoic acid as well as that of various unsaturated fatty acids containing ten and twelve carbon atoms.

The quite marked inhibition of *Histoplasma capsulatum* and *Blastomyces dermatitidis* by undecylenic acid seems to indicate that the unsaturated fatty acids should not be overlooked in future searches for possible therapeutic agents for the deep mycotic infections.

It may be mentioned at this point that the copper and triethanolamine salts of Δ 9,10-hendecynoic acid were prepared, and their fungistatic activities compared with the activity of the acid itself. Despite the fact that the copper salt was extremely insoluble, it was considerably more active, requiring from $^1/_4$ to $^1/_{20}$ the concentration of the acid itself for complete inhibition of the fungi. The triethanolamine salt was slightly less active but much more soluble than the acid itself. Further work with the triethanolamine salt showed it to be markedly fungicidal to *Trichophyton mentagrophytes* in a concentration of 0.8% at *p*H values above 7.0.

## SUMMARY

Δ 9,10-Hendecynoic acid was shown to have considerable *in vitro* fungistatic activity, although slightly less than that of undecylenic acid.

Using the isomeric *n*-octynoic acids, the position of unsaturation was shown to have some bearing on fungistatic and bacteriostatic activity.

It is felt that the triple bond unsaturated fatty acids warrant further investigation as possible therapeutic agents in fungus infections.

## REFERENCES

(1) Peck, S. M., and Rosenfeld, H., *J. Investigative Dermatol.*, 1, 237(1938).
(2) Wyss, O., Ludwig, B. J., and Joiner, R. R., *Arch. Biochem.*, 7, 415(1945).

## WHO MAKES IT?

The National Registry of Rare Chemicals, Armour Research Foundation, 33rd, Federal and Dearborn Streets, Chicago, Ill., seeks information on sources of supply for the following chemicals:

Methylene sulfate
2,2′-Biimidazole
2-Chloro-3-mercaptopropionic acid
Dimethyldibenzylammonium hydroxide
β-Collidine
7-Aminoquinaldine-5-carboxylic acid
3,3-Dimethylglutaric acid
2-Chlorocyclohexanone
2-Phenyl-1,3-indanedione
4-Amino-2-thiopyrimidine
2,5-Dimethyl-4-aminopyrimidine
5-Bromo-2-amino-*n*-valeric acid
Methyl-2-amino-3-chloropropionate hydrochloride
3-Ketolauric acid
Desoxyribose-5-phosphoric acid
Ribose-5-phosphoric acid
Eriodictyol
1,7-Diiodoheptane
Soya lipase
4,8-Diaminoquinoline
4-Bromocyclohexanone
4-Methyl-4-bromocyclohexanone

# Book Reviews

*Organic Chemistry in Pharmacy.* EDITED BY CHARLES O. WILSON AND OLE GISVOLD. J. B. Lippincott, Philadelphia, 1949. xiv + 622 pp. 17.5 x 26 cm. Price $9.

This book presents the chemistry of organic medicinal products, including practically all of those contained in the U. S. P. XIII, N. F. IX, and New and Nonofficial Remedies. It is intended primarily as a textbook for students of pharmacy who have completed basic organic chemistry, and it is well suited for this purpose. It includes the structures of most of the products and describes briefly their chemical properties and syntheses, as well as their physiological action and the therapeutic usefulness. The dose is given in most cases.

This book should serve its purpose as a textbook very well, for it presents in orderly form the chemistry of medicinal compounds and in most cases gives very little more than one might expect the student to learn. The organization seems to be very good, the more complex structures being left to the latter part of the book and the chemicals being taken up in the order of their chemical classification. This book will probably be very acceptable to the student.

In the early part of the book there is a fairly lengthy discussion of the relationship between physical properties of chemicals and their biological action, and an attempt is made to correlate such effects as solubility, *p*H, surface activity, and hydrogen bonding to biologic action. The material presented is accurate, but one cannot help noting that, despite the fact that many years of attempts have produced no general principles relating physical properties to physiological activity, this book allots twenty-one pages to the physical theories. On the other hand, the metabolite antagonist theory, which has been well accepted and promises to play an important role in development of new drugs, is given only a half-page treatment. It is the opinion of the reviewer that this emphasis will mislead the student into placing much more importance upon physical property relationships than is deserved.

A chapter on metabolic changes of drugs in the body is included, which will be of considerable value to the student. It is believed that the general subject of metabolic change is adequately covered in most courses of biochemistry and that perhaps this text would have done better to have dealt exclusively with drugs. The authors of this chapter have called the attention of the student to the fact that "detoxication" is a misnomer in the first page of the chapter, yet they continue to use the term "detoxication" throughout the chapter, and it might safely be predicted that the student will be stuck with this term just as his previous generation has been. The reviewer believes that it would have been better to have left out the word "detoxication," except for the early explanation of its misuse. Some generalizations are drawn regarding metabolic changes that may be misleading to the student. For example, the statement is made that "toxic substances having relatively high partition coefficients. . .will tend to be converted into compounds having a lower partition coefficient and lower toxicity." Although this generalization may be true, it again may be misleading by tending to make the student accept a willful metabolic reaction. Throughout this chapter there are frequent statements which attempt to tie in physical properties of compounds and metabolic reactions which they undergo.

Although it is assumed by the authors that the student using this book will have completed basic organic chemistry, they persist in most instances to include very simple elementary chemistry to introduce each of the chemical classifications. This seems to be entirely unnecessary in a book of this type. At the same time it is found that the chemistry of some of the medicinal products is presented in no more detail than one might find in an elementary organic chemistry book. The syntheses of most of the common medicinals are included, although one finds some of the more interesting syntheses such as that of Chloramphenicol, the new morphine derivatives, and Methadone missing.

The authors have included very few of the reactions that were used to determine structure of the various naturally-occurring products, such as alkaloids and terpenes. Little effort is made to trace the development of medicinal chemicals, whether natural or synthetic.

*Organic Chemistry in Pharmacy* is a book that may be used to advantage by the student as a textbook or by the teacher as an outline, and if supplemented properly by lectures, it should serve well for the purpose intended.

*Pharmaceutical Compounding and Dispensing.* RUFUS A. LYMAN, EDITOR-IN-CHIEF. J. B. Lippincott, Philadelphia, 1949. ix + 321 pp. 17.5 x 26 cm. Price $6.50.

This book, like its predecessors in the *American Pharmacy Series*, is constituted of the contributions of a number of authors. The chapter headings are as follows (author's surname in parentheses): 1. Dispensing Through the Ages (Urdang); 2. The Prescription (Plein); 3. Accuracy in Dispensing (Ohmart); 4. Dosage Forms (Ohmart); 5. Dermatological Pharmaceuticals (Zopf); 6. Solutions (Sprowls); 7. Solubility (Higuchi); 8. Incompatibility and the Incompatibilities of Inorganic Compounds (Busse); 9. Incompatibilities of Organic Compounds (Wurster); 10. Prescription Packages and Labels (Snowden); 11. Prescription Pricing (Briggs); and 12. Interprofessional Relations (Foote).

The underlying philosophy of this book is stated in the following quotation taken from the preface. "The authors of this volume have felt that the analytical and deductive attitude encouraged by this approach is more of an eventual benefit to the practice of pharmacy of today than short-term memorizing of series of more or less unrelated facts. For this

reason the treatment of specific cases has been deemphasized in favor of generalization with additional information available in table form to permit ready application to the situation at hand. It must be kept in mind that, while the prescription of tomorrow will, in all likelihood, not contain many of the items of our materia medica of today, the future medicinal compounds, nevertheless, will still obey chemical and physical laws."

It may be stated that this principle of relative permanency, guaranteed by general rules and theories of proved validity, has been observed likewise in the chapters devoted to the phases of compounding and dispensing of a primarily technical, economical, or ethical professional nature as Accuracy in Dispensing, Prescription Pricing, Prescription Packages and Labels and Interprofessional Relations.

All in all, this volume is, to a great extent, not only a new book but a new venture. Its authors and editors hope that it will "help pharmacy keep its place in a period of change."

Chapter 3, Accuracy in Dispensing, appears particularly appropriate at this time when the subject of prescription accuracy and tolerances is under scrutiny. Like the others, this chapter is well written. Its many suggestions of proper procedures are very welcome. However, some will differ with the general statement that an accuracy of ±5 per cent, "can be achieved with the equipment ordinarily available in a retail pharmacy...," especially since recent studies, such as those of Goldstein, have indicated that such small tolerances are difficult to achieve in the compounding of small quantities.

Chapters 7, 8, and 9, dealing with solubility and incompatibilities, present a fundamental departure from the traditional approach to these subjects in that specific examples are minimized and the treatment is to a considerable extent on the basis of physicochemical laws. The more traditionally minded teachers will undoubtedly find some difficulty in adapting themselves and their teaching techniques to this different approach.

In general, this reviewer believes that this is a good book, excellent for reference, but requiring considerable supplementation in most courses of compounding and dispensing.—ELMON L. CATALINE.

*A Manual of the Penicillia.* BY KENNETH B. RAPER AND CHARLES THOM. Williams and Wilkins, Baltimore, 1949. ix + 875 pp. Illustrated. 15 x 23.5 cm. Price $12.

Frequently in the past, molds have been considered largely as destructive pests to be eradicated, or as organisms of academic interest only, that serve for the delectation of idiosyncratic research workers. The recent advent of the modern era of antibiotic therapy, however, has elevated molds and other microorganisms to a more desirable position in the public eye. Moreover, all fungi capable of biosynthesizing antibiotics have become of great interest and practical importance in terms of public health and so indirectly for the pharmacist.

Probably no mycologists are better qualified by experience and accessibility to culture collections than Drs. Raper and Thom to treat exhaustively the complex group comprising the Penicillia. This they have done in a scholarly manner while clarifying many points that have long been doubtful to students of the fungi.

The book is arranged in three parts. The first part, dealing in generalities, treats successively: Historical Aspects, Generic Diagnosis and Synonomy, Cultivation and Preservation of the Penicillia, and Penicillin.

Part II, consisting of the manual proper, is largely descriptive and taxonomic. It contains more than taxonomic keys and descriptions, however. The authors have cultured thousands of strains of molds under different conditions in their effort to detect past synonomy in the naming of these organisms and in order to be able to describe the appearance of the different fungi in various circumstances. This is a very important aspect of their book. The time and effort spent by the authors in this task should immeasurably help those who use the book. The generous use of line drawings and especially of photographs throughout Parts I and II is to be commended.

Part III is devoted to reference material and contains two extensive bibliographies, one general, the other arranged according to topics which include a wide range of subjects.

Allergies, deterioration and spoilage, antibiotics, industrial by-products, cheese manufacture, vitamins, culturing of fungi, enzymes, fat production, and dermatomycoses are among the sixty categories covered. Space prohibits listing all subjects, but the above is sufficient to show that research workers and technicians in any field related to the Penicillia will find useful references.

The check list of organisms in Part III is most complete and should prove valuable, especially since the authors have taken great care to indicate probable synonomy of names.

The authors state a twofold purpose in preparation of the manual: First, "to facilitate the identification of Penicillia"; second, "to introduce the user to whatever information has accumulated regarding the physiology, biochemistry, pathogenicity, or other characteristics of individual species and groups." These objectives they have achieved with consummate skill and in an interesting manner. This book should be a classic for mycologists for many years to come.—ROBERTSON PRATT.

*Microbiology.* BY FLORENE C. KELLY AND K. EILEEN HITE. Appleton-Century-Crofts, Inc., New York, 1949. xv + 592 pp. Illustrated. 15 x 24 cm. Price $6.50.

This book is designed as a textbook for an introductory bacteriology wherein more comprehensive treatment in bacteriology is intended than is usually given in a beginning course, particularly in the field of pathogenic microbiology. There is included in the early portion of the book a short historical treatment, along with the typical general introduction to the protozoa, algae, fungi, and bacteria. A chapter very useful for the student on the use of the microscope is included, as well as a chapter on sterilizing and cleaning laboratory equipment and cultivation methods. There is a satisfactory treatment of bacterial physiology and of nitrogen and carbon cycles. The section on inheritance and variation and the development of bacterial populations is, in the opinion of the reviewer, unusually well presented in a form that will be readily understood by the student. Approximately two hundred pages is devoted to pathogenic microbiology wherein the disease-produc-

ing organisms are described, along with some of their general characteristics and some information as to the relative importance of the disease, and this is probably as detailed as is desirable for a general course. There is a short chapter on chemotherapy dealing primarily with sulfonamides, penicillin, streptomycin, and tyrothricin. This section is so brief that it is of doubtful value, except as general information.

It is believed that this book will serve very suitably for introductory microbiology to pharmacy students and is quite worthy of consideration by the teacher.

*Fundamental Principles and Processes of Pharmacy.* HENRY M. BURLAGE, EDITOR. McGraw-Hill Book Company, New York, 1949. xiv + 651 pp. Illustrated. 14 x 21 cm. Price $5.

Since its original publication in 1944 this volume has found considerable recognition and use as a text for introductory courses in pharmacy. In this second edition the type has been completely reset in a more readable fashion and improvements in text material have been made throughout the volume.

For those who may not be familiar with the text, the following brief outline is supplied. The early chapters deal with orientation material—the historical development of the profession, ethical principles, the pharmaceutical curriculum, branches and opportunities in pharmacy, and the pharmaceutical literature. With the exception of a chapter dealing with the natural products used in pharmacy, the remainder of the text pages are in complete accord with the title, since they are devoted to a complete and thorough discussion of the principles and processes which are utilized in pharmaceutical operations, with no attempt to bring in extensive commentaries on the official compendia. Each chapter concludes with a list of collateral readings and study questions which are of great assistance to the student and teacher. This feature has been expanded in the present revision. The appendix contains a list of books for the pharmacist's library, a statement of minimum standard equipment for a pharmacy, and a compilation of visual aids. An unusual feature of the book, particularly useful to the beginning student, is its pronouncing index.

While the discussions of fundamental principles and processes are more thorough than any others with which the reviewer is familiar, some instructors may feel that they are too advanced for the beginning student. For example, the chapter on physical properties of matter contains extensive discussions of specific gravity, viscosity, refractometry, optical rotation, colorimetry, and surface tension—all of which are customarily included in other courses such as physics, analytical chemistry, drug analysis, and others. On the other hand, some will undoubtedly feel that the extensive treatment of the physical aspects of pharmacy is in keeping with the present trend in pharmaceutical education.

Frequent illustrations and drawings add to the interest and ease of interpretation of the text.—JOSEPH B. SPROWLS.

## BOOKS RECEIVED

*Introductory Botany.* BY ALEXANDER NELSON. The Chronica Botanica Co., Waltham, Mass., 1949. viii + 479 pp. Illustrated. 14 x 22 cm. Price $3.75.

*Review of Pharmacy.* 6th ed. BY GEORGE W. FIERO. John Wiley and Sons, New York, 1949. 121 pp. 15 x 23 cm. Price $3.

*Malaria—The Biography of a Killer.* BY LEON J. WARSHAW. Rinehart and Company, New York, 1949. viii + 348 pp. 14 x 22 cm. Price $3.75.

*Bulletin on Narcotics.* No. 1. A United Nations Department of Social Affairs publication. Columbia University Press, Morningside Heights, N. Y., 1949. 61 pp. Illustrated. 21.5 x 28 cm. Price $0.50.

*Antibiotics.* BY ROBERTSON PRATT AND JEAN DUFRENOY. J. B. Lippincott Company, Philadelphia, 1949. xi + 255 pp. Illustrated. 15.5 x 23.5 cm. Price $5.

*Science and Civilization.* EDITED BY ROBERT C. STAUFFER. University of Wisconsin Press, Madison, 1949. xiii + 212 pp. 14 x 21.5 cm. Price $2.50.

*Laboratory Fractional Distillation.* BY THOMAS P. CARNEY. The Macmillan Company, New York, 1949. vii + 259 pp. Illustrated. 15.5 x 24 cm. Price $5.75.

*Laboratory Manual for Pharmacognosy.* BY EDWARD P. CLAUS. John E. Kicher, Publisher, Pittsburgh, 1949. 109 pp. 21.5 x 28 cm.

*The Analytical Chemistry of Industrial Poisons, Hazards and Solvents.* 2nd ed. Chemical Analysis series, Vol. I. BY MORRIS B. JACOBS. Interscience Publishers, Inc., New York, 1949. xviii + 788 pp. Illustrated. 15 x 24 cm. Price $12.

*The Essential Oils. Volume III. (Individual Essential Oils of the Plant Families Rutaceae and Labiatae).* BY ERNEST GUENTHER. D. Van Nostrand Company, Inc., New York, 1949. xvi + 777 pp. Illustrated. 15 x 23.5 cm. Price $10.

*Chymia: Annual Studies in the History of Chemistry. Volume II.* TENNEY L. DAVIS, EDITOR-IN-CHIEF. University of Pennsylvania Press, Philadelphia, 1949. x + 143 pp. Illustrated. 15 x 24 cm. Price $4.

*Pharmaceutical Selling, "Detailing," and Sales Training.* 1st ed. BY ARTHUR F. PETERSON. McGraw-Hill Book Company, New York, 1949. xviii + 374 pp. Illustrated. 15 x 23.5 cm. Price $4.50.

*The Rat in Laboratory Investigation.* 2nd ed. EDITED BY EDMOND J. FARRIS AND JOHN Q. GRIFFITH. J. B. Lippincott, Philadelphia, 1949. xvi + 542 pp. Illustrated. 15 x 23.5 cm. Price $15.

*Vegetable Gums and Resins.* BY F. N. HOWES. Waltham, Mass.: The Chronica Botanica Co.; New York City: Stechert-Hafner, Inc., 1949. xx + 188 pp. Illustrated. 17.5 x 26.5 cm. Price $5.

# 3½ times the service with

T. M. REG. PYREX U.S. PAT. OFF.

## CULTURE TUBES

Clinical research requires culture tubes in large numbers. Consequently, their cost, service life considered, is a matter of importance. From this standpoint alone, you will find that PYREX brand culture tubes are the best investment. Careful records maintained over a period of years by large culture tube users show that PYREX tubes last 3½ times longer than other brands.

This is not so surprising when you consider that no other glass stands up like PYREX brand No. 7740. Compare it with any other laboratory glassware under identical conditions. The superiority of PYREX ware to chemical, thermal and physical resistance will be readily demonstrated.

All of this is reflected in more accurate analysis. Your laboratory dealer carries complete stocks of PYREX brand culture tubes for your ordering convenience.

*Stocked by Leading Laboratory Supply Houses*

CORNING GLASS

PYREX

CORNING GLASS WORKS • CORNING, N. Y.

LABORATORY GLASSWARE

TECHNICAL PRODUCTS DIVISION: LABORATORY GLASSWARE • SIGNALWARE • GLASS PIPE • GAUGE GLASSES • LIGHTINGWARE • OPTICAL GLASS • GLASS COMPONENTS

NOW AVAILABLE IN COMMERCIAL QUANTITIES!

Exchange

# HESPERIDIN METHYL CHALCONE

**(A water soluble "Vitamin P" Drug)**

**THE MANUFACTURING PHARMACIST** now has available in one moderately priced material an infinitely soluble yet non-hygroscopic powder sufficiently stable for production of parenteral as well as peroral preparations.

**TO THE PHYSICIAN** it provides a quickly assimilated yet safe drug...a completely water soluble derivative of citrus hesperidin.

**HESPERIDIN METHYL CHALCONE** was developed by the Research Laboratories of The California Fruit Growers Exchange shortly after Szent-Gyorgyi's announcement of "Vitamin P."

**CALIFORNIA FRUIT GROWERS EXCHANGE**

**PRODUCTS DEPARTMENT • ONTARIO, CALIFORNIA**

400 West Madison Street, Chicago, Illinois  99 Hudson Street, New York City

SUPPLIED TO PHARMACEUTICAL FIRMS SERVING THE MEDICAL PROFESSION

Vol. XXXIX January, 1950 No. 1

# SPECIAL SUPPLEMENT

## *SCIENTIFIC EDITION*

# JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

This issue in two parts

PART II—SPECIAL SUPPLEMENT

*CONTENTS*


Brief History and Summary of the Activities of the Association ..... 1
Constitution and By-Laws ..... 5
Certificate of Incorporation ..... 17
Code of Ethics ..... 18
List of Active Members ..... 37
Officers of the American Pharmaceutical Association and Its Sections, Dates and Places of Meetings Since Its Organization .. 20
Official Roster and Pharmaceutical Directory for 1949–1950:
List of Officers, Standing and Special Committees, and Delegations ..... 29
List of A. Ph. A. Local Branches ..... 31
List of A. Ph. A. Student Branches ..... 32
List of National Pharmaceutical Associations, Conferences, and Other Organizations .... 33
List of National Related Professional Organizations ..... 33
List of State Pharmaceutical Associations .. 33
List of Accredited Colleges of Pharmacy ... 34
List of State Boards of Pharmacy ..... 35
List of National Pharmaceutical Publications ..... 36
List of Sectional, State, and Local Publications ..... 36


*Copyright 1950, by the American Pharmaceutical Association*

# ANNOUNCEMENT

Prior to 1945, the "Proceedings of the American Pharmaceutical Association," the "Yearbook of the American Pharmaceutical Association," the JOURNAL of the A. PH. A. and the Proceedings number of the JOURNAL of the A. PH. A. included the list of members of the A. PH. A., the list of officers of the ASSOCIATION and its Sections since their beginning, the list of meeting places from the time of organization of the ASSOCIATION and the Constitution and By-Laws, Code of Ethics and similar information. This information has historical value and is of importance to officers and members of committees.

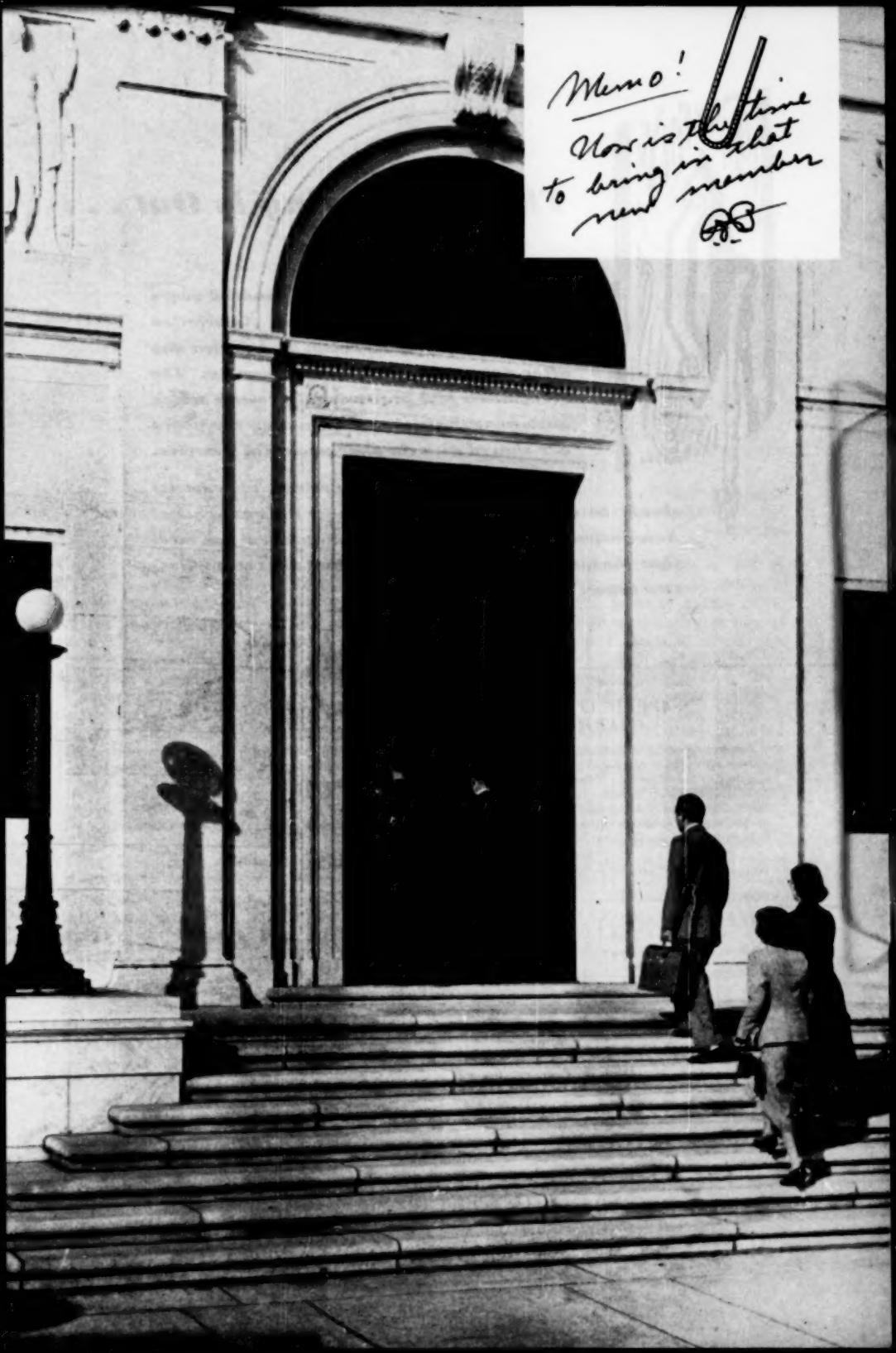
Last year we segregated this information in a single volume which was published as Part II of the March, 1949, issue of the Scientific Edition of the JOURNAL. The favorable reception accorded this innovation has caused us to continue it. This time the publication date has been advanced to January and it is our plan to publish a similar supplement each year with the January issue of THIS JOURNAL.

The Supplement includes the official roster and directory of officers and committees for 1949–1950 along with current authentic lists of boards of pharmacy and their secretaries, state pharmaceutical associations and their secretaries, the lists and officers of the local and student branches of the ASSOCIATION, and a list of national, sectional, state and local publications in the field of pharmacy.

There is also a list of national pharmaceutical associations and related professional societies, which is referred to frequently by members of the ASSOCIATION in their general and specialized activities.

This Supplement includes a list of active members in good standing as of October 31, 1949. Members who joined the ASSOCIATION after October 1, 1949, have been listed in one of the issues of the Practical Pharmacy Edition of THIS JOURNAL since that date and will be listed in the next Supplement.

ROBERT P. FISCHELIS, *Secretary*
AMERICAN PHARMACEUTICAL ASSOCIATION


Memo!
Now is the time
to bring in that
new member

# *The Latchstring is Out . . .*

***For nearly one hundred years the American Pharmaceutical Association has served the pharmacists of America day after day as their professional society. The recognition and professional prestige which have come to the Association over the years are shared with the pharmacists of America.***

***Every American pharmacist should be a member of the American Pharmaceutical Association. Please tell the next non-member you meet that the latchstring is out and have him use the application below.***

## *APPLICATION FOR ACTIVE MEMBERSHIP IN THE AMERICAN PHARMACEUTICAL ASSOCIATION*

Approving of its objectives, I hereby apply for active membership in the AMERICAN PHARMACEUTICAL ASSOCIATION. I enclose $10 to cover annual dues for 12 months beginning with the month following my election to membership. Membership includes subscription to the JOURNAL OF THE A. PH. A. which is published monthly in two editions, "*Practical Pharmacy*" and "*Scientific.*" Subscription to the JOURNAL for non-members is $4 for each Edition or $7 combined. Members of the A. PH. A. receive a 50% discount on the regular subscription rate of each Edition. Therefore $2 for each edition (total $4) is allocated for subscription to the JOURNAL.

Name in Full (Miss—Mr.—Mrs.—) _____

Street and No. _____

City _____ Zone _____ State _____

Date of Birth _____ State Assn. member in _____

Graduate of _____ Year _____ Degrees _____

Licensed Pharmacist in (states) _____

Please indicate by check mark below your classification(s) according to present employment:

__ Retail Pharmacist; __ Hospital Pharmacist; __ Government Pharmacist; __ Teacher; __ Wholesaler; __ Manufacturer; __ Representative; __ Research or Control Chemist; __ Association Official; __ Student; __ Other _____

Signature of Applicant _____

This application is endorsed by the following members of the AMERICAN PHARMACEUTICAL ASSOCIATION:

Name _____ Name _____

Please send this application with check or money order for $10 to:
ROBERT P. FISCHELIS, Secretary, American Pharmaceutical Association
2215 Constitution Avenue N. W., Washington 7, D. C.

SUP

# BRIEF HISTORY AND SUMMARY OF THE ACTIVITIES OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

The AMERICAN PHARMACEUTICAL ASSOCIATION was formally organized in Philadelphia, October 6–8, 1852, following a preliminary meeting of leaders of the profession in New York City in 1851. Perhaps the most important factor leading to the formation of the organization was a desire on the part of the pharmacists and physicians of that day to improve the quality of drugs which were being imported. The leaders in the movement to organize the ASSOCIATION were practicing pharmacists, members of faculties of Colleges of Pharmacy, and other persons of scientific training who were anxious to maintain and achieve higher standards of professional practice and improvement of the quality of drugs offered to the American people.

The objectives as stated in the Constitution were to "unite the educated and reputable pharmacists of America in an effort to improve and regulate the drug market by preventing the importation of inferior, adulterated, or deteriorated drugs, and by detecting and exposing home adulterations; to encourage proper relations with the other health professions; to improve pharmaceutical science by diffusing scientific knowledge, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and encouraging domestic production and manufacture of drugs and medicines; to regulate education and training of pharmacists; to suppress empiricism and to restrict the dispensing and distribution of medicines to qualified pharmacists; to uphold standards of authority in the education, theory, and practice of pharmacy with a view to the highest good and the greatest protection to the public."

The ASSOCIATION's membership includes practicing pharmacists, wholesale druggists, pharmaceutical manufacturers and their representatives, drug importers, teachers, research workers, editors and publishers of pharmaceutical publications, pharmaceutical chemists, food and drug officials, hospital pharmacists, association officials, students, and pharmacists in the government service.

Annual dues for Active Members are $10, including both the *Practical Pharmacy Edition* of the JOURNAL and the *Scientific Edition* of the JOURNAL. Associate Membership is open through Student Branches to students in schools and colleges of pharmacy. Such members have all the privileges of active membership except those of voting, holding office, or committee membership.

Student member dues are $3.00 a year, including the *Practical Pharmacy Edition* of the JOURNAL or the *Scientific Edition* of the JOURNAL or $5.00 including both editions of the JOURNAL; of these amounts, $1.00 is remitted to the Student Branch for its support.

The by-laws also provide that any member of the ASSOCIATION who shall pay to the Treasurer the sum of $200 during the first year of his connection therewith and after having been elected as an active member upon payment of the regular membership dues, and also any member not in arrears who after 10 years shall pay the sum of $150, or after 15 years the sum of $100, or after 20 years the sum of $80, or after 25 years the sum of $50, and also any member who may have paid annual dues for 40 consecutive years, may, upon application, become a life member.

Members of State Pharmaceutical Associations in good standing are affiliates and receive the *Practical Pharmacy Edition* of the JOURNAL under certain conditions.

Separate subscription to the JOURNALS is $4.00 a year for each JOURNAL or $7.00 a year for both editions.

Publications of the ASSOCIATION include the National Formulary, which is now in its eighth edition; the Pharmaceutical Recipe Book, now

in its third edition; the *Scientific Edition* of the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, now in its thirty-ninth volume; the *Practical Pharmacy Edition* of the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, now in its eleventh volume; and the *Bulletin of the National Formulary Committee*, now in its eighteenth volume. The ASSOCIATION also publishes monographs on selected subjects at irregular intervals.

The ASSOCIATION holds annual meetings. The ASSOCIATION's 21 Local Branches and 61 Student Branches in various cities hold monthly or semimonthly meetings.

The ASSOCIATION makes two scientific awards: The Ebert Prize, consisting of a medal, which is awarded annually to the author of the best paper presented before the Scientific Section; and The Kilmer Prize, consisting of a gold key, which is awarded annually for the best paper submitted on a subject related to pharmacognosy.

At the request of the Iodine Educational Bureau, Inc., the ASSOCIATION has acted as sponsor of the Iodine Educational Bureau, Inc. Award for Research in the Pharmaceutical Chemistry of Iodine. This is an award of $1000 given in recognition and encouragement of outstanding research in the chemistry and pharmacy of Iodine and its compounds as applied in pharmacy or medicine.

The recipient of the award is expected to deliver a lecture on his researches before one of the Sections at the annual meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION. The first of these awards was made at the convention of the ASSOCIATION held in Jacksonville, Florida, the week of April 24, 1949.

The New York Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION also makes an annual award known as The Remington Medal to the man or woman who has done the most for American pharmacy during the preceding year or whose efforts during a number of years have resulted in the most important contribution to American pharmacy.

The ASSOCIATION is governed between annual conventions by a Council consisting of sixteen members, and its principal business at annual meetings is carried on by the House of Delegates which is made up of representatives of State and National Pharmaceutical Associations, Sections of the ASSOCIATION and the Council.

The ASSOCIATION participates actively in the American Council on Pharmaceutical Education, the American Foundation for Pharmaceutical Education, the American Documentation Institute, the American Society for Testing Materials, the U. S. Pharmacopœial Convention, the Commission on Standardization of Biological Stains, the American Association for the Advancement of Science, and the International Pharmaceutical Federation. Its representatives are called into consultation by various Government agencies on matters pertaining to pharmaceutical education, and on the production, standardization, and distribution of drugs and medicines.

The activities of the Laboratories of the ASSOCIATION are directed toward the establishment and improvement of adequate standards of purity, quality, and strength of drugs and medicines, particularly those of the National Formulary.

Through its Committee on Pharmaceutical Research the ASSOCIATION makes research grants for studies relating to the standardization and development of drugs.

The ASSOCIATION maintains its own building and laboratory, library and museum facilities in Washington. The building and grounds, including the memorial to all pharmacists who served in the wars of our country, occupy the block on Constitution Avenue between 22nd and 23rd Streets. This building also houses the editorial and administrative offices of the ASSOCIATION.

# CONSTITUTION AND BY-LAWS
## OF THE
# American Pharmaceutical Association

---

## CONSTITUTION

**(With all amendments, including those of San Francisco meeting, August 8–14, 1948)**

**Article I. Name and Objects.** This ASSOCIATION shall be called the "American Pharmaceutical Association." Its aim shall be to unite the educated and reputable Pharmacists and Druggists of America in the following objects:

1. To improve and regulate the drug market by preventing the importation of inferior, adulterated or deteriorated drugs and by detecting and exposing home adulterations.

2. To encourage such proper relations among Pharmacists, Druggists, Physicians and the people at large, as may promote the public welfare, and tend to mutual strength and advantage.

3. To improve the science and art of Pharmacy by diffusing scientific knowledge among Pharmacists and Druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, encouraging home production and manufacture in the several departments of the drug business.

4. To regulate the system of apprenticeship and employment, so as to prevent, as far as practicable, the evils flowing from deficient training in the responsible duties of preparing, dispensing and selling medicines.

5. To suppress empiricism, and to restrict the dispensing and sale of medicines to regularly educated Pharmacists and Druggists.

6. To uphold standards of authority in the Education, Theory and Practice of Pharmacy.

7. To create and maintain a standard of professional honesty equal to the amount of our professional knowledge with a view to the highest good and greatest protection to the public.

**Article II. Membership.** This ASSOCIATION shall consist of active, associate, life and honorary members, and shall hold its meetings annually.

**Article III. Officers.** The officers of the ASSOCIATION shall be a president, two vice-presidents and an honorary president, who shall be elected for a term of one year, and a secretary, a treasurer and nine councilors, who shall be elected for a term of three years. The officers shall be elected as provided in the By-Laws and shall hold office until the installation of their successors.

**Article IV. Investment of Moneys and Funds.** All moneys received from life membership, together with such funds as may be bequeathed, or otherwise donated, to the ASSOCIATION, may be invested by the Treasurer in United States Government, State, Municipal, County or other securities acceptable as security for postal savings deposits, the interest of which for any current year only may be used by the ASSOCIATION for its expenses.

**Article V. Amendments.** Every proposition to alter or amend this Constitution shall be printed in the JOURNAL, at least thirty days prior to the annual meeting, shall be read at the first general session of the annual meeting, and shall be balloted upon at a subsequent general session, when, upon receiving the affirmative votes of two-thirds of the members present, it shall become a part of the Constitution. Any proposition to amend the Constitution for the purpose of permitting the expenditure of the permanent invested funds of the ASSOCIATION shall require a majority of seven-eighths for its passage.

---

# BY-LAWS

**(With all amendments, including those of Jacksonville meeting, April 24–30, 1949)**

## CHAPTER I.—ELECTION OF OFFICERS AND MEMBERS OF THE COUNCIL

**Article I. Nomination of President, Vice-Presidents and Councilors.** The House of Delegates shall at its Second Session held during the annual meeting of the ASSOCIATION nominate by ballot three candidates, one of whom shall be, as hereinafter provided, elected President to serve for one year; three candidates for First Vice-President, one of whom shall be elected for one year; three candidates for Second Vice-President, one of whom shall be elected for one year; and nine candidates, three of whom shall be, as hereinafter provided, elected members of the Council to serve for three years. No person shall be nominated for the office of Councilor who shall have been elected to this office for two consecutive terms unless one convention shall have elapsed between the end of his second term and the beginning of the term for which he is nominated. The Council is empowered and directed to fill all vacancies in the list of nominees, which may occur by death or resignation, after the adjournment of the annual meeting of the ASSOCIATION and prior to the issuance of mail ballots.

**Article II. Mail Ballot.** The names of these candidates shall be submitted by mail to every member of the ASSOCIATION by the Secretary within two months after their nomination, together with a request that the member indicate on a ballot enclosed for that purpose his choice of candidates for the offices to be filled and return the same by mail within thirty days of the date printed on the ballot.

**Article III. Counting of Ballots.** The ballots received within thirty days of the date printed on the ballots are to be sent by the Secretary to the Board of Canvassers, who shall count the votes of dues-paid members only, and shall in turn certify to the Secretary the result of the election, after which the names of the successful candidates shall be published in the JOURNAL OF THE ASSOCIATION.

**Article IV. Installation of Officers and Councilors.** The officers thus elected by a plurality of votes, together with the other officers elected as hereinafter provided, shall be installed at the final general session of the first annual meeting of the ASSOCIATION following their election.

**Article V. Election of Honorary President, Secretary and Treasurer.** The Honorary President of the ASSOCIATION, also the Secretary and the Treasurer shall be elected annually by the House of Delegates on nomination by the Council.

## CHAPTER II.—DUTIES OF THE OFFICERS

**Article I. President.** The President shall preside at all general sessions of the ASSOCIATION and shall perform the customary and parliamentary duties established by usage. He shall prepare an address to be presented at the first general session of the annual meeting following his installation. He shall nominate the members of the standing committees unless otherwise provided for, and submit the names of the nominees to the Council for ratification at the first meeting of the Council held after his installation. He shall be an *ex-officio* member of the Council.

**Article II. Vice-Presidents.** In the event of the decease or incapacity of the President, the First Vice-President shall assume the duties of the President for the unexpired term of office, and in the event of the decease or incapacity of both the President and First Vice-President, the Second Vice-President shall assume the duties of the President for the unexpired term of office.

**Article III. Secretary.** The Secretary shall keep the minutes of the general sessions of the ASSOCIATION and of the House of Delegates. He shall verify the credentials of the members of the House of Delegates. He shall prepare for publication the official program. He shall give notice of the time and place of annual and special meetings of the ASSOCIATION and of the House of Delegates. He shall notify members and officers of their election and committee members and delegates of their appointment. He shall revise the roll of members. He shall collect the dues of the members of the ASSOCIATION and remit the same to the Treasurer of the ASSOCIATION. He shall perform such other duties as may be directed by the House of Delegates or Council. He shall be an *ex-officio* member of the Council. He shall give bond for the proper care and disposition of the funds of the ASSOCIATION which may come into his hands, in such amount as may be prescribed by the Council. The Secretary shall also serve as General Manager of the ASSOCIATION and shall have executive supervision over its activities, including direction of and responsibility for the headquarters building and the activities of the ASSOCIATION carried on therein subject to such limitations as are otherwise provided in these By-Laws or as may be provided for by action of the Council. In the event of the resignation, decease or incapacity of the Secretary, the vacancy shall be filled by vote of the Council for the remainder of the unexpired term.

**Article IV. Treasurer.** The Treasurer shall be the custodian of all moneys, securities and deeds belonging to the ASSOCIATION, and shall hold the same subject to the direction and disposition of the Council. He shall file a good and sufficient bond or bonds with the Council for the faithful performance of his duties, this bond, or bonds, to be signed and executed by a trust company acceptable to the Council. He shall be an *ex-officio* member of the Council. In the event of the resignation, decease or incapacity of the Treasurer, the vacancy shall be filled by vote of the Council for the remainder of the unexpired term.

## CHAPTER III.—COUNCIL

**Article I. Membership.** The Council shall consist of 16 members, 9 of whom shall have held membership in the ASSOCIATION for five years or more, are not officers of House of Delegates and have been elected as hereinbefore provided. The President, the immediate Past-President, the Vice-Presidents, the Chairman of the House of Delegates, the Secretary and the Treasurer of the ASSOCIATION shall be *ex-officio* members of the Council. The elected members of the Council shall serve until their successors have been installed.

**Article II. Vacancies.** Vacancies which may occur in the Council may be filled by vote of the Council. The members thus elected shall serve until their successors elected at the next annual election of the ASSOCIATION shall have been installed.

**Article III. Meetings—Quorum.** The Council shall meet immediately after the annual meeting of the ASSOCIATION and at such other times as it may determine, or at the call of the Chairman, or as otherwise provided for. Nine members shall constitute a quorum.

**Article IV. Organization.** At its first meeting following the annual meeting of the ASSOCIATION, the Council shall organize by electing from its own membership a Chairman, a Vice-Chairman and a Secretary, and the Chairman shall appoint such committees of the Council as may be necessary or desirable.

**Article V. Duties.** The Council shall have supervision of all property, funds, finances and publications of the ASSOCIATION. It shall elect the Editors and the Local Secretary. It shall nominate, for election by the House of Delegates, the Honorary President, the Secretary and Treasurer of the ASSOCIATION. It shall fix the salaries of officers and employees of the ASSOCIATION and shall prepare an annual budget. It shall ratify the standing committees nominated by the President unless otherwise provided for. It shall act on the applications for membership in the ASSOCIATION. The Council shall act for the ASSOCIATION and House of Delegates in the interim between meetings and shall submit through its Secretary to the House of Delegates at its first session during the annual meeting an annual report.

**Article VI. National Formulary and Supplements.** The Council shall from time to time provide for the publication of such new revisions of the National Formulary and for the publication of such supplements thereto as it may deem necessary. The Council shall also by resolution specify the dates from and after which such new revisions of the Formulary or of the Supplements thereto shall supersede the revision previously official

## CHAPTER IV.—FINANCES

**Article I. Source of Funds.** The necessary funds for carrying on the activities of the ASSOCIATION shall be raised by the collection of membership dues, from the publications of the ASSOCIATION, and in any other manner approved by the Council. The Council shall appropriate the funds necessary to defray the expenses of the ASSOCIATION.

**Article II. Deposit of Moneys.** The Treasurer shall deposit all moneys received by him with a reliable banking company, or companies, recommended by the Committee on Property and Funds and approved by the Council, where said moneys may be drawing interest for the benefit of the ASSOCIATION, unless otherwise provided for. Said moneys shall be deposited in the name of the AMERICAN PHARMACEUTICAL ASSOCIATION.

**Article III. Payment of Moneys or Funds.** Moneys or funds shall be paid out by numbered voucher checks signed by the Secretary and Treasurer.

**Article IV. Payment of Bills.** Unless otherwise provided for, the correctness of every bill shall be certified by the person contracting the same and by the Secretary, and the latter shall note on the bill the appropriation against which the bill is to be charged. A voucher check showing the appropriation against which the payment is charged shall then be drawn and signed by the Secretary. Upon receipt of the check, together with the original bill the Treasurer shall complete the check, affix his signature and return the check with the bill to the Secretary who shall forward the check and file the bill. In the event of the incapacity of either the Secretary or the Treasurer, the signature of the Chairman of the Council shall be accepted in lieu of that of the officer incapacitated.

**Article V. Investment of Money or Funds.** Unless otherwise provided for, the money or the funds of the ASSOCIATION may be invested in bonds, deeds and other securities upon recommendation of the Committee on Property and Funds and the approval of the Council.

**Article VI. Designation of Banks and Safe Deposit Vaults for Funds, Securities and Deeds.** The Committee on Property and Funds shall annually recommend to the Council for approval the banks and safe deposit vaults in which the funds, securities and deeds of the ASSOCIATION shall be kept for the ensuing year.

**Article VII. Custodian of Funds, Securities and Deeds.** The bank books, securities and deeds shall be in the name of the AMERICAN PHARMACEUTICAL ASSOCIATION with the Treasurer as custodian, and the accounts of the same shall be kept by him.

**Article VIII. Auditing of Accounts.** The Committee on Finance shall on or about December the first of each year recommend to the Council for their approval a certified public accountant, or accountants, who shall audit all accounts of the ASSOCIATION before March the first of the next fiscal year,

and who shall report the results of the audit promptly to the Council through its Secretary.

**Article IX. Annual Reports of the Secretary and Treasurer.** The Secretary and Treasurer shall balance the accounts of the ASSOCIATION and prepare their financial reports as promptly as possible after the close of the fiscal year. Their reports with the books, accounts, vouchers, etc., shall be promptly made available to the accountant or accountants for audit.

**Article X. Expense of Bonds of Secretary and Treasurer.** The expense of the bonds required to be given by these officers or any other officers or employees of the ASSOCIATION shall be paid by the ASSOCIATION.

**Article XI. Merging of Balances.** All balances remaining from appropriations at the close of each fiscal year shall be turned back into the treasury unless otherwise ordered by the Council.

**Article XII. Salary Year of Officers.** The salary year of the officers of the AMERICAN PHARMACEUTICAL ASSOCIATION shall run from July 1st of one year to July 1st of the next year.

**Article XIII. Expenditure of Funds.** Any action taken by the ASSOCIATION, or by the House of Delegates, or by any of the Sections, which involves an expenditure of funds of the ASSOCIATION, shall be submitted to the Council for consideration and final disposition.

## CHAPTER V.—HOUSE OF DELEGATES

**Article I. Membership.** The House of Delegates shall be composed of accredited representatives, apportioned as stated below, of the following organizations, such representatives to have been members of the A. PH. A. in good standing for at least two years immediately prior to their admission:

(*a*) One from each section of the AMERICAN PHARMACEUTICAL ASSOCIATION, and one each from the National Conference of State Pharmaceutical Association Secretaries, the Conference of Pharmaceutical Law Enforcement Officials, the Plant Science Seminar, the American College of Apothecaries, and the American Society of Hospital Pharmacists.

(*b*) One from each local branch of the AMERICAN PHARMACEUTICAL ASSOCIATION which has not less than fifty dues-paid members and which during the preceding fiscal year held not less than six meetings with an attendance of not less than nine members at each meeting.

(*c*) One from each of the following associations: National Association of Retail Druggists, National Wholesale Druggists' Association, American Association of Colleges of Pharmacy, National Association of Boards of Pharmacy, American Drug Manufacturers' Association, the Proprietary Association, American Pharmaceutical Manufacturers' Association and the Federal Wholesale Druggists' Association.

(*d*) One from each affiliated State Pharmaceutical Association and each territorial Pharmaceutical Association which has been officially organized for at least one year and one additional representative for each two hundred or major fraction of two hundred dues-paid members of the AMERICAN PHARMACEUTICAL ASSOCIATION where such membership of the State Association or territorial association exceeds two hundred.

(*e*) The members of the Council.

**Article II. Term of Service of Delegates.** The elected or appointed members of the House of Delegates shall hold office for a term of one year or until the credentials of their successors shall have been verified by the Secretary. The terms of office shall begin with the annual meeting following their election or appointment.

**Article III. Meetings—Quorum.** The House of Delegates shall meet on the first day of the annual meeting of the ASSOCIATION and prior to the First General Session. It shall also meet following the First and before the Second General Session and thereafter at the call of the Chairman, or upon the written request of thirty delegates representing a majority of the affiliated state associations. Twenty-five voting members of the House of Delegates shall constitute a quorum for the transaction of business.

**Article IV. Officers.** The officers shall consist of a Chairman and a Vice-Chairman, who shall be elected as provided in the By-Laws of the House of Delegates. The Secretary of the ASSOCIATION shall act as Secretary of the House of Delegates. These officers shall serve for one year or until their successors are installed. The chairman shall present an address, at the first session of the annual meeting, upon any subject which he deems of Pharmaceutical importance.

**Article V. Election and Nomination of Officers and Councilors of the Association.** At its Second Session the House of Delegates shall elect a Secretary and Treasurer of the ASSOCIATION on nomination of the Council. It shall nominate candidates for President, Vice-President, Councilors of the ASSOCIATION, and shall receive the reports of the general officers not otherwise provided for, of the Council, the Sections and of the Standing and Special Committees. It shall make an annual report covering its transactions for the year to the first general session of the ASSOCIATION. At its meeting following the first general session it shall receive the President's address. It shall present a report on this address, and on such other matters as may be necessary, to the second general session of the ASSOCIATION. Any further reports may be made to subsequent general sessions of the annual meeting. It shall select the time and place of the annual meeting and shall transact all general business of the ASSOCIATION not otherwise provided for in the Constitution and By-Laws.

**Article VI. Fraternal Delegates.** Fraternal delegates may be received from any of the departments of the United States Government and organizations connected with or related to pharmacy as the House of Delegates may determine. Such fraternal delegates may be granted the privilege of the floor but shall not be entitled to vote.

## CHAPTER VI.—SECTIONS

**Article I. Sections and Additions.** To expedite and render more efficient the work of the ASSOCIATION, the following sections are provided:

1. Scientific Section.
2. Section on Education and Legislation.
3. Section on Practical Pharmacy.
4. Section on Pharmaceutical Economics.
5. Section on Historical Pharmacy.

Additions to or deletions from the list of sections may be made by the House of Delegates upon the recommendation of the Council.

**Article II. Membership.** Attendance upon the meetings of the sections and the presentation of competent papers therein shall be open to any member of the AMERICAN PHARMACEUTICAL ASSOCIATION. Each section, with the approval of the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION, shall establish the qualifications for membership in such section and no person shall be eligible to vote or hold office in such section who does not satisfy the requirements for membership therein.

**Article III. Meetings—Quorum.** The sections shall meet at such time and place, during the annual meeting of the ASSOCIATION, as may be provided for in the annual program. Fifteen members shall constitute a quorum at any meeting of a section.

**Article IV. Delegate to the House of Delegates.** Each section shall elect by ballot a voting delegate to the House of Delegates who shall hold office for a term of one year or until a successor is elected.

**Article V. Officers.** Each section shall, with the approval of the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION, adopt such By-Laws, rules, and regulations, and name such officers and committees as may be necessary for the proper conduct of its work.

**Article VI. Duties—Records.** Each section through its officers, shall solicit papers and propose suitable subjects for discussion at its annual meetings, arrange the business of the section in advance and perform such duties as may be referred to it. It shall make an annual report to the House of Delegates. The minutes of each meeting, together with all documents and papers which belong to each section must be placed immediately after the meeting in the hands of the secretary for publication and safekeeping.

**Article VII. Papers—Submission and Disposal.** Any person desiring to submit a paper to the ASSOCIATION shall present to the secretary of the section to which it refers, at least 10 days prior to the annual meeting, an abstract of said paper indicating its contents and consisting of not less than 50 nor more than 200 words. The paper itself shall be submitted to the officers of the section for approval prior to its first meeting. Not more than 15 minutes shall be allowed for the presentation of any paper unless by the unanimous consent of the section. All papers presented to the sections shall become the property of the ASSOCIATION with the understanding that they are not to be published in any other publication prior to their publication in those of the AMERICAN PHARMACEUTICAL ASSOCIATION, except with the consent of the editor of the appropriate JOURNAL and the Chairman of the Committee on Publications of the Council. Papers and addresses submitted by special invitations of the officers of the sections shall not be subject to the requirements of this Article.

## CHAPTER VII.—LOCAL BRANCHES AND STUDENT BRANCHES

**Article I. Formation and Location.** Local branches of this ASSOCIATION may be formed wherever it may appear that 15 members of this ASSOCIATION, in good standing, will participate, provided that no more than one such branch shall be formed in any one state, province, district or territory unless such branches shall be formed at a point distant 100 miles or more from any branch already established in the same state, province, district or territory.

**Article II. Members.** All active or voting members of local branches must be members of this ASSOCIATION in good standing.

**Article III. Objects and Relation to the Association.** The objects and aims of local branches of this ASSOCIATION shall be the same as set forth in ARTICLE I of the Constitution of this body, and the acts of local branches shall in no way commit or bind this ASSOCIATION, and can only serve as recommendations to it. And no local branch shall enact any article of Constitution or By-Law to conflict with the Constitution or By-Laws of this ASSOCIATION.

**Article IV. Representation in the House of Delegates.** Each local branch having not less than 50 dues-paid members of the ASSOCIATION, holding not less than six meetings annually with an attendance of not less than nine members at each meeting, and the proceedings of which shall have been submitted to the JOURNAL for publication, may elect one representative to the House of Delegates.

**Article V. Suspension.** If within any one calendar year any local branch shall fail to hold at

least three stated meetings, the proceedings of which are reported in the JOURNAL, the branch shall be deemed to be suspended.

**Article VI. Student Branches.** Student Branches may be established at such places and upon such terms and conditions as the Council shall prescribe. The members of Student Branches shall be associate members of the ASSOCIATION.

**Article VII. Fees to Be Collected from Members of Student Branches.** The Council may authorize a rebate to student branches of a portion of the fees paid by the members of such branches, but all such rebates shall be devoted exclusively to the promotion of the activities of such branches, and any portion of such rebate remaining unappropriated at the end of the college year shall be returned to the treasury of the ASSOCIATION.

## CHAPTER VIII.—STANDING AND SPECIAL COMMITTEES

**Article I. Standing Committees.** Unless otherwise provided for, there shall be nominated by the President and ratified by the Council the following Standing Committees:

1. Committee on Local and Student Branches.
2. Board of Canvassers.
3. Committee on Membership.
4. Committee on Legislation.
5. Committee on United States Pharmacopœia.
6. Committee on the National Formulary.
7. Committee on Recipe Book.
8. Committee on Pharmaceutical Syllabus.
9. Committee on Pharmaceutical Research.
10. Committee on Ebert Prize.
11. Committee on Kilmer Prize.
12. Committee on Public Relations.
13. Committee on the Status of Pharmacists in the Government Service.
14. Committee on Policy and Planning.

**Article II. Board of Canvassers.** The Board of Canvassers shall be composed of three members appointed by the President. It shall carry out the duties provided for under the election of officers.

**Article III. Committee on Membership.** The Committee on Membership shall be composed of a general chairman, district chairmen and state chairmen, the latter each with one or more associates. It shall be the duty of this committee to invite the membership of pharmacists and others interested in pharmacy and to coöperate with the state associations in the effort to bring their membership into the AMERICAN PHARMACEUTICAL ASSOCIATION.

**Article IV. Committee on U. S. P.** The Committee on the United States Pharmacopœia shall be nominated by the President of the ASSOCIATION as follows: One member to be appointed for ten years, and one for nine, eight, seven, six, five, four, three, two and one years, respectively, each vacancy occurring by expiration of term to be filled by a new appointment for ten years. The Committee shall elect its own chairman annually. It shall collect statistics regarding the frequency with which official and non-official remedies are used in legitimate practice, and shall endeavor to ascertain the general wishes and requirements of the profession throughout the country in regard to any desired changes or improvements in the Pharmacopœia. It shall also note errors of any kind found in the U. S. Pharmacopœia so as to facilitate and aid the work of the National Committee of Revision of the U. S. P.

**Article V. Committee on National Formulary.** The Committee on National Formulary shall consist of a chairman elected by the Council for a term of ten years and ten members elected by the Council to serve for a term of one, two, three, four, five, six, seven, eight, nine, and ten years, respectively; *and the Director of the* A. PH. A. *laboratory who shall be a member of the Committee, ex-officio;* each vacancy occurring from expiration of term shall be filled by election for the unexpired term. The Committee shall elect a Vice-Chairman and a Secretary from its own membership. This Committee shall serve as an executive committee of revision of the National Formulary; the members shall serve as chairmen of the subcommittees of the Committee and shall nominate to the Council additional participating members of each subcommittee to the number of not more than five, at least one member of each subcommittee to be a retail pharmacist. The Committee on National Formulary shall report annually, or as often as required, to the Council.

**Article VI. Committee on Pharmaceutical Syllabus.** The Committee on Pharmaceutical Syllabus shall be nominated by the President of the ASSOCIATION as follows: One member shall be appointed for seven years, and one for six, five, four, three, two and one years, respectively, each vacancy occurring from expiration of term shall be filled for a term of seven years; other vacancies shall be filled at the annual meetings of the ASSOCIATION for the unexpired terms. This committee shall be members of the National Committee on Pharmaceutical Syllabus and shall recommend to the ASSOCIATION its proportionate share of the current expenses.

**Article VII. Committee on Pharmaceutical Research.** The Committee on Pharmaceutical Research shall be elected by the Council, two members to serve for a term of five years, two for a term of four years, two for a term of three years, two for a term of two years, two for a term of one year and after the expiration of the one-year term two members shall be elected annually for a term of five years. The Chairman of the U. S. P. Revision Committee, the Chairman of the Committee on N. F., the Chairman of the Committee on Unofficial Standards, the Chairman of the Scientific Section of the A. PH. A., the Chairman of the National Conference on Pharmaceutical Research, the Secretary of the A. PH. A. and the Treasurer of the A. PH. A. shall be associate members of the Committee. The Committee on Pharmaceutical Research shall en-

deavor to promote research along pharmaceutical lines and shall advise the Council as to the use of the research funds of the ASSOCIATION.

**Article VIII. Committee on Recipe Book.** The Committee on Recipe Book shall consist of a chairman elected by the Council for a term of five years, and six members elected by the Council, one of whom shall serve for a period of one, two, three, four, five and six years, respectively; each vacancy occurring from expiration of term shall be filled by election for a term of six years; other vacancies shall be filled by election for the unexpired term. The Committee shall prepare revisions of the Recipe Book from time to time as may be decided necessary by the Council and shall report annually, or as often as required, to the Council and shall nominate to the Council additional participating members of each subcommittee to the number of not more than five, at least one member of each subcommittee to be a retail pharmacist.

**Article IX. Committee on Ebert Prize.** The Committee on Ebert Prize, which shall be appointed by the Chairman of the Scientific Section, shall, at the next annual meeting after the one at which essays are presented, determine which, if any of them, has met the requirements of the founder of the prize. In all respects it shall be governed by the stipulations expressed by the donor.

**Article X. Committee on Kilmer Prize.** The Committee on Kilmer Prize shall be appointed by the Chairman of the Scientific Section and shall award the Kilmer Prize in accordance with the rules and regulations which may from time to time be adopted by the Scientific Section and approved by the Council. In all respects it shall be governed by the stipulations expressed by the donor.

**Article XI. Committee on Policy and Planning.** The Committee on Policy and Planning shall be appointed by the President of the ASSOCIATION. It shall be the duty of this Committee to formulate a long-time program of policy by which the ASSOCIATION may work steadily from year to year in an orderly fashion toward the attainment of the objectives as set forth in Article I of the Constitution. The Committee shall also discharge such other duties as may be assigned to it by the Council.

**Article XII. Duties of Standing Committees.** The duties of the Standing Committees, unless otherwise provided for, shall be those assigned to them by the Council.

**Article XIII. Special Committees.** Special Committees of the ASSOCIATION shall be appointed by the President of the ASSOCIATION. Special Committees of the House of Delegates shall be appointed by the Chairman of the House of Delegates.

## CHAPTER IX.—MEMBERSHIP

**Article I. Eligibility.** Every pharmacist, active or retired, and all other persons interested in the science and art of pharmacy, being of good moral and ethical standing, who, after duly considering the objects of the ASSOCIATION and the obligations of the Constitution and By-Laws, subscribe to them, shall be eligible to membership. Any person whose name has been dropped from the roll of members for non-payment of dues may be readmitted after having again made application in regular form, the application being accompanied by the usual fee; or he may be readmitted, without such application, on payment of all back dues; in the latter case, his membership shall date from the time when he first joined the ASSOCIATION, as previously printed in the Roll of Members.

**Article II. Election—Membership Year—Publications Furnished Free to Members.** Every application for membership shall require the endorsement of two members of the ASSOCIATION in good standing, and every application must be approved by a two-thirds vote of the Council. Every application for membership shall be accompanied by the dues for at least one year. Every newly elected member shall be entitled to such publications as are distributed free of charge by the ASSOCIATION during the membership year. The period of membership shall be one year from the first of the month following the date of election, and may be renewed for like periods by the further payment of dues.

**Article III. Payment of Dues and Subscriptions—Suspension.** Membership dues and the subscription prices of the JOURNALS of the ASSOCIATION shall be established by the Council. Every member shall pay in advance the annual dues and the subscription prices of the JOURNALS that he elects to receive. Every membership or subscription in arrears for a period of two months after they become due shall be dropped from the membership or subscription rolls. Reinstatements may be made in accordance with the provisions of Article I of this Chapter. The publications of the ASSOCIATION for which a subscription price is fixed shall be sent to each member for the twelve-month period for which his subscription is entered.

**Article IV. Life Members.** Any member of the ASSOCIATION who shall pay to the Treasurer the sum of $100.00 during the first year of his connection therewith, and also any member not in arrears, who after 10 years shall pay the sum of $75.00, or after 15 years the sum of $50.00, or after 20 years the sum of $40.00, or after 25 years the sum of $25.00, and any member who may have paid annual dues for 37 consecutive years, shall become a life-member, and shall be exempt from all future annual contributions, provided that beginning January 1, 1948 fees for Life Membership shall be determined by the Council. (In accordance with this provision the Council determined the following fees for Life Membership effective January 1, 1948:

Any member of the ASSOCIATION who shall pay to the Treasurer the sum of $200 during the first year of his connection therewith and after having been elected as an active member upon payment of the regular membership dues, and also any member not in arrears who after 10 years shall pay the sum of $150, or after 15 years the sum of $100, or after 20 years the sum of $80, or after 25 years the sum of $50, and also any member who may have paid annual dues for 40 consecutive years, may, upon application, become a life member.)

Upon the death or resignation of a life member who has paid a life membership fee, the amount paid by said member for life membership shall be transferred from the life membership fund to the general fund of the ASSOCIATION.

**Article V. Honorary Members.** Pharmacists, Chemists and other scientific men who may be thought worthy of the distinction and who are recommended to and approved by the Council may be elected honorary members. They shall not, however, be required to pay dues, nor shall they be eligible to hold office or vote.

**Article VI. Associate Members.** The Council may provide for the election of associate members and may fix the annual fee to be paid by such members. Associate members shall not be entitled to vote at the annual meetings or to participate in the election of the general officers of the ASSOCIATION.

**Article VII. Expulsion.** Any member may be expelled for improper conduct, or the violation of the Constitution, By-Laws, or Ethics, adopted by the ASSOCIATION, but no person shall be expelled unless he shall have received for expulsion two-thirds of all the votes cast at a general session.

**Article VIII. Resignation.** Resignation of membership shall be made in writing to the Secretary or Treasurer, but no resignation shall be accepted from anyone who is in arrears to the Treasury.

All resignations shall be acknowledged in writing by the officer who receives them, and shall be reported to the Council.

## CHAPTER X.—GENERAL MEETINGS

**Article I. Time—Sessions.** The meetings shall be held annually: Provided that in case of failure of this, from any cause, the duty of calling the ASSOCIATION together shall devolve upon the President, or one of the Vice-Presidents, with the advice and consent of the Council. At least three general sessions of the annual meeting shall be provided for, the First General Session to be held on the first day of the annual meeting.

**Article II. Order of Business.** At the First General Session of the annual meeting, the President's address shall be received and referred to the House of Delegates. The annual report of the House of Delegates shall also be received at this session. At the Second General Session, the report of the House of Delegates on the President's address, and on such other matters as may be necessary shall be received. At the Final General Session, the officers for the ensuing year shall be installed. At any general session such other general business as may be presented may be transacted.

**Article III. House of Delegates.** Any action taken by the House of Delegates can be negatived at a general session by a majority vote with not less than 50 members present and voting.

## CHAPTER XI.—RULES OF ORDER AND DEBATE

**Article I. Rules and Appeals.** The ordinary rules of parliamentary bodies shall be enforced by the presiding officer, from whose decision, however, appeals may be taken, if required by two members, and the meeting shall thereupon decide without debate.

**Article II. Motions.** When a question is regularly before the assembly and under discussion, no motion shall be received but to adjourn, to lay on the table, for the previous question to postpone to a certain day, to commit or amend, to postpone indefinitely; which several motions have precedence in the order named. A motion to adjourn shall be decided without debate.

**Article III. Debate.** No member may speak twice on the same subject, except by permission, until every member wishing to speak has spoken.

**Article IV. Voting.** On the call of any two members, the ayes and nays shall be ordered, when every member shall vote, unless excused by a majority of those present, and the names and manner of voting shall be entered on the minutes.

**Article V. Points of Order.** On all points of order not covered in these By-Laws, the ASSOCIATION shall be governed by the established usages in all assemblies governed by parliamentary rules.

## CHAPTER XII.—MISCELLANEOUS

**Article I. Quorum of Committees.** A majority of the members of any of the Standing or Special Committees shall constitute a quorum for the transaction of business.

**Article II. Council and Committees—Voting by Mail.** In all questions arising before the Council or before any of the Standing or Special Committees, and which can be disposed of by positive or negative vote, the Chairman of the Council or the Chairman of any of these Committees may take the vote of their respective bodies in writing, and the same shall have the same force and effect as if members

had been personally present, a majority of the votes cast being considered sufficient to decide a question. The ayes and nays of such votes taken by the Council shall be entered upon the minutes of said Council.

**Article III. Conflict or Inconsistency.** If any By-Law of the Council or House of Delegates is found to be in conflict or inconsistent with these By-Laws, the provisions of these By-Laws shall be given precedence until such time as the conflict or inconsistency may be corrected by proper amendment of the respective By-Laws.

### CHAPTER XIII

**Article I. Amendments.** Every proposition to alter or amend these By-Laws shall be submitted in writing at a general session, and may be balloted for at any subsequent general session, when, upon receiving the votes of three-fourths of the members present, it shall become a part of the By-Laws.

---

# BY-LAWS OF THE COUNCIL

**(As amended at the Denver meeting of the A. PH. A., August 16–20, 1942)**

### CHAPTER I.—ELECTION OF OFFICERS

**Article I. Officers—Organization.** The officers of the Council shall consist of a Chairman, a Vice-Chairman and a Secretary. The Secretary of the ASSOCIATION shall be the Secretary of the Council.

They shall be elected and assume the duties of their respective offices at the organization meeting of the Council held immediately after the final general session of the AMERICAN PHARMACEUTICAL ASSOCIATION at its annual convention.

**Article II. Duties of the Chairman.** The Chairman shall preside at all meetings of the Council and in his absence or on account of inability from any cause, the Vice-Chairman shall assume the duties of the Chairman or, in the absence of both, a Chairman *pro tempore* shall perform the duties of the Chairman.

**Article III. Duties of the Secretary.** The Secretary shall keep fair and correct minutes of the proceedings of the meetings and carefully preserve all reports and communications received by the Council.

He shall conduct the official correspondence of the Council and arrange for the transaction of the business of the Council by correspondence in the interim between meetings. He shall announce all votes promptly and keep the members of the Council informed of all business at regular intervals.

### CHAPTER II.—COMMITTEES

**Article I. Standing Committees.** The Standing Committees of the Council shall consist of a Committee on Finance, a Committee on Property and Funds and a Committee on Publications.

**Article II. Committee on Finance.** The Committee on Finance shall consist of three members of the Council to be appointed by the Chairman, subject to the approval of the Council, and shall each year, previous to January 1st, present to the Council for its consideration a list of appropriations to cover the various expenditures of the ensuing fiscal year. No payment shall be made in excess of any of the said appropriations, except by a special vote of the Council. Provided, however, that the Treasurer is authorized to transfer from one appropriation account to another such amount as may be needed at any time, the amount of any such transfer not to exceed the sum of fifty ($50.00) dollars.

All motions and resolutions involving the expenditure of any sum in excess of $25.00 shall have the approval of the Finance Committee before being acted upon by the Council.

All appropriations made for any fiscal year shall lapse at the end of the said fiscal year. Provided, however, that accounts properly chargeable against any of said appropriations prior to their expiration, but not received by the Secretary of the ASSOCIATION until after the end of the fiscal year, may be paid from such appropriation, in case the warrant for such payment be drawn not later than 30 days after the expiration of said fiscal year.

**Article III. Committee on Property and Funds.** The Committee on Property and Funds shall consist of the President, the Treasurer, the Chairman

of the Council, the Chairman of the Committee on Finance and the Secretary of the ASSOCIATION.

It shall have charge of the administration of all the property and established funds of the ASSOCIATION.

The Committee shall consider applications for grants from the interest derived from the established funds and at as early a date as possible shall report to the Council such recommendations as may be deemed proper.

The Council shall pass upon the recommendations of the Committee and in case the grants are approved, the Chairman of the Council shall direct orders to be drawn upon the Treasury in favor of those to whom grants have been made.

**Article IV. Committee on Publications.** The Committee on Publications shall be appointed by the Chairman of the Council and shall consist of three members of the Council, subject to approval by the Council, the Secretary to the ASSOCIATION and the Treasurer. The Chairman of the Committee shall be appointed by the Chairman of the Council.

The Committee on Publications shall have charge of the editing, publication and distribution of the JOURNALS of the ASSOCIATION and such other publications as may be issued under the rules and regulations to be approved by the Council. The Committee may delegate the authority for editing, publishing and distributing the JOURNALS to the respective Editors subject to such rules and regulations as the Committee may pass from time to time.

The Editors of the JOURNALS shall be elected by the Council and shall receive for their services such compensation as the Council may direct.

In case of resignation, illness or other inability of an Editor to carry on the work of the JOURNALS or other publications, the Committee on Publications shall be authorized to make temporary arrangements to continue the work.

**Article V. Special Committees.** Special Committees may be appointed as needed and shall expire at the end of the annual meeting unless specific provision is made for their continuance.

## CHAPTER III.—MEETINGS

**Article I. Time and Quorum.** The Council shall meet previous to the assembling of the ASSOCIATION and at such other times as it may determine, or at the call of the Chairman.

On the written application of five members of the Council the Chairman shall call a special meeting.

Nine members of the Council shall constitute a quorum.

## CHAPTER IV.—ORDER OF BUSINESS

**Article I. The order of business at regular meetings of the Council shall be as follows unless otherwise determined:**

1. Call to order and roll call.
2. Reading of minutes.
3. Reading of communications.
4. Reports of Committees.
5. Unfinished and deferred business or such business as is especially referred to the Council from the ASSOCIATION.
6. The election of members of the ASSOCIATION.
7. New business.
8. Adjournment.

## CHAPTER V.—MISCELLANEOUS

**Article I. Quorum of Committees.** A majority of the members of any of the Standing Committees shall constitute a quorum for the transaction of business.

**Article II. Motions—Voting by Mail.** Questions arising in the interim between meetings may be submitted to the members by mail and motions so submitted shall not require a second. A majority of the votes cast, provided they constitute a quorum of the Council or Committee, shall decide the question.

**Article III. Amendments.** Every proposition to alter or amend these By-Laws shall be submitted in writing at one session and may be balloted for at the next session of the Council, when upon receiving a vote of three-fourths of the members present it shall become a part of these By-Laws.

# BY-LAWS OF THE HOUSE OF DELEGATES

**(As amended at the Philadelphia meeting of the A. PH. A., September 13–18, 1926)**

## CHAPTER I

**Article I. Opening of the House of Delegates.** The First Session of the House of Delegates at each Annual Meeting shall be called to order by the Chairman, the Vice-Chairman or the Secretary.

**Article II. Delegates.** Immediately after the First Session of the House of Delegates has been called to order, the Secretary shall report the accredited representatives, who shall then compose the House of Delegates.

**Article III. Voting.** Each delegate shall be entitled to one vote. No delegate shall act as proxy of another delegate who has not been seated, nor as delegate for more than one association or organization.

**Article IV. Fraternal Delegates.** Fraternal delegates may be received from organizations not entitled to voting delegates. These delegates shall have the privileges of the floor in other than executive sessions, but without vote.

**Article V. Privileges.** Any member of the AMERICAN PHARMACEUTICAL ASSOCIATION may attend any session of the House of Delegates, other than an executive session, and shall have the privilege of the floor.

## CHAPTER II

**Article I. Officers of the House.** The officers of the House of Delegates shall be a Chairman, a Vice-Chairman and a Secretary. The Secretary of the ASSOCIATION shall act as Secretary of the House. These officers shall be elected annually as hereinafter provided, and shall serve for a term of one year, or until their successors are installed. The Chairman and Vice-Chairman shall be installed at the final session of the House held during the annual meeting of the ASSOCIATION.

**Article II. Election of the Honorary President, the Secretary and Treasurer of the Association.** At the Second Session of the House of Delegates held during the annual meeting of the ASSOCIATION, the House shall elect the Honorary President, the Secretary and Treasurer of the ASSOCIATION, on nomination of the Council.

## CHAPTER III

**Article I. Duties of the Chairman and Vice-Chairman.** The Chairman shall preside at all meetings of the House of Delegates, except in the case of his absence or on account of inability to preside from any other causes, when the Vice-Chairman shall preside. In the event of the inability of both the Chairman and Vice-Chairman, to preside, a temporary Chairman shall be elected by the House of Delegates, except at the opening of the First Session of the House when the Secretary shall preside as hereinbefore provided. The presiding Chairman shall perform the duties specified or referred to in the By-Laws of the ASSOCIATION and the customary and parliamentary duties established by usage.

The Chairman shall prepare, with the assistance of the Secretary, and present at the First General Session of the ASSOCIATION the annual report of the House of Delegates.

**Article II. Duties of the Secretary.** The Secretary shall perform the duties specified in the By-Laws of the ASSOCIATION. He shall read all papers received for the purpose; shall call and record the ayes and nays whenever they are required to be called; he shall notify committees of the House of Delegates of their appointment, stating the business on which respective committees are to act. With respect to the verification of credentials of the members of the House of Delegates, the Secretary shall, at least two months before the annual meeting send appropriate blank credentials for delegates to the various bodies entitled to representation in the House of Delegates and notify the said bodies of the time when the credentials properly filled out shall be returned to him. He shall report the verified credentials to the First Session of the House of Delegates as hereinbefore provided. Credentials received and verified after the First Session of the House of Delegates shall be reported at the Second Session. The proceedings of the House of Delegates as submitted by the Secretary shall be printed annually in the JOURNAL of the ASSOCIATION and the Secretary shall procure a sufficient number of reprints of the same for distribution among the members of the House of Delegates and the officers of the ASSOCIATION. Said reprints shall also contain a list of the members, officers and committees of the House of Delegates.

## CHAPTER IV

**Article I. Committee on Nominations.** At its First Session held during the annual meeting of the ASSOCIATION, the Chairman shall appoint a Committee on Nominations consisting of nine members, whose duty it shall be to nominate the candidates for the office of President, First Vice-President, Second Vice-President, and the candidates for membership in the Council as provided in Chapter I of the By-Laws of the ASSOCIATION. They shall also nominate the Chairman and Vice-Chairman of the House of Delegates. The report of the Committee on Nominations shall be received and acted upon at the Second Session of the House of Delegates as directed in Chapter I of the By-Laws of the ASSOCIATION. Additional nominations may be made from the floor by members of the House.

**Article II. Committee on Place of Meeting.** At the final session held during the annual meeting of the ASSOCIATION, the Chairman of the House of Delegates shall appoint a Committee on Place of Meeting consisting of five members, whose duty it shall be to consider invitations, which may be received during the next year, and to report to the next annual meeting with respect to the place of the annual meeting following. The report of this committee shall be received and acted upon at the Second Session of the House of Delegates.

**Article III. Committee on Resolutions.** At the First Session held during the annual meeting of the ASSOCIATION, the Chairman shall appoint a Committee on Resolutions consisting of nine members, to which shall be referred the address of the President of the ASSOCIATION, and such resolutions and reports as the House of Delegates shall by vote decide to refer to such committee, and which shall report to the House of Delegates at each of its sessions on the matters referred to it.

**Article IV. Special Committees.** The Chairman shall appoint such special committees of the House of Delegates as may be necessary. Special committees shall expire at the end of the next annual meeting unless specific provision is made for their continuance.

## CHAPTER V

**Article I. Motions.** All motions shall receive the affirmative vote of a majority of the members present for adoption.

**Article II. Amendments.** Every proposition to amend the By-Laws of the House of Delegates shall be submitted in writing at one session of the House and may be acted upon at the next session, when, upon receiving the affirmative vote of three-fourths of the members present, it shall become a part of these By-Laws.

## CHAPTER VI

**Article I. Order of Business.** The following shall be the order of business unless otherwise determined:

1. Call to order.
2. Roll call of delegates.
3. Reading and adopting of the minutes.
4. Appointment of committees.
5. Ratification of Special Committees of the ASSOCIATION.
6. Receipt of reports and other communications from the ASSOCIATION, the Council and Sections, all of which shall be in writing.
7. Receipt of resolutions, reports and other communications all of which shall be in writing.
8. Unfinished business.
9. New business.
10. Nomination of officers of the ASSOCIATION to be elected by mail ballot, and election of officers of the ASSOCIATION upon nomination by the Council.
11. Election and installation of officers of the House.
12. Adjournment to a certain time.

## CHAPTER VII

**Article I. Rules of Order.** The procedure of the House of Delegates shall be governed by Robert's Rules of Order, Revised, when not in conflict with these By-Laws or with any rules adopted by the House.

# BY-LAWS OF THE SECTIONS

## BY-LAWS OF THE SCIENTIFIC SECTION OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

### CHAPTER I

**Article I. Name.** This organization shall be known as the Scientific Section of the AMERICAN PHARMACEUTICAL ASSOCIATION.

### CHAPTER II

**Article I. Membership.** All members of the AMERICAN PHARMACEUTICAL ASSOCIATION in good standing, who express a desire to do so, by registering their names with the Secretary of the Section shall become members of the Section.

### CHAPTER III

**Article I. Officers.** The officers of the Section shall be a Chairman, a First Vice-Chairman, a Second Vice-Chairman, a Secretary and a Delegate to the House of Delegates, selected from members of the Section.

### CHAPTER IV

**Article I. Election of Officers.** The Chairman of the Section shall at the First Session appoint a committee of three, who shall report to the Section at the last session one name for each office, selected from the members of this Section; in addition, any member has the privilege of making further nominations from the floor of the meeting. At the final session of the Section all names placed in nomination shall be balloted upon. The one receiving a majority for that particular office shall be declared elected. These shall then be installed and shall hold office for one year or until their successors are duly elected.

**Article II. Term of Office.** Officers may be reëlected, but with the exception of the Secretary shall not hold the same office for more than two consecutive years.

*Note.*—At the Des Moines meeting of the A. PH. A., and with the approval of the Council, the closing sentence of Article I of Chapter IV was amended to read:

> "These officers shall then be installed and, with the exception of the Secretary, shall hold office for one year, or until their successors are duly elected."

and Article II of Chapter IV was amended to read:

> "**Article II.** The officers, with the exception of the Secretary, shall not hold the same office for more than two consecutive years; the term of office of the Secretary shall be for a period of three years and he shall be eligible for reëlection."

**Article III. Vacancies.** The Council of the ASSOCIATION shall fill any vacancies that may occur among the officers.

**Article IV. Presiding Officer.** In the absence of the Chairman and the First Vice-Chairman the Second Vice-Chairman shall preside and exercise all the functions of the Chairman.

**Article V. Temporary Chairman.** In the absence of all three of these officers, the Section shall elect a temporary Chairman.

### CHAPTER V.—DUTIES OF THE SECRETARY

**Article I. Recording—Notices.** The Secretary shall keep a record of the proceedings of the Section, and shall transmit current records to the incoming Secretary of the Section and records of permanent value to the Historian of the ASSOCIATION. He shall send to the members such notice as the business of the Section may require, shall transmit to the House of Delegates the names of the officers elected and the committees appointed, as well as any changes in the personnel of the committees. He shall furnish the House of Delegates a report of the sessions held at the annual meeting. The Secretary, at least two months in advance, shall write to each member of this Section, giving notice of the latest date upon which papers can be accepted for the program.

**Article II. Custodian.** The Secretary shall be custodian of the records and documents of the Section, and shall transmit records to the incoming Secretary of the Section and records of permanent value to the Historian of the ASSOCIATION.

**Article III. Program.** The Secretary shall furnish the Editor of the JOURNAL of the ASSOCIATION the program for inclusion in the number just preceding the annual meeting.

**Article IV. Annual Report.** The Secretary shall at each annual meeting present a brief report to the ASSOCIATION of the condition within the Section.

**Article V. Temporary Secretary.** In case the Secretary is unable to attend the annual meeting, he shall notify the Council to that effect and the Council shall then appoint a temporary Secretary.

## CHAPTER VI.—MEETINGS

**Article I. Sessions.** At least three sessions of the Section shall be held at each annual meeting of the ASSOCIATION. Additional sessions may be held at any time during the meeting when the officers of the Section may see fit, and by consent of the Council; provided, however, that these sessions shall be so arranged that they will conflict as little as possible with sessions of other Sections, and that no session be held simultaneously with the general sessions of the ASSOCIATION or the House of Delegates.

**Article II. Special Sessions.** Special sessions may be held at the discretion of the officers for the purpose of permitting lectures which will require more time than allowed in Chapter IX, Article III. These special sessions may be held simultaneously with the regular meetings of this Section.

**Article III. Joint Sessions.** Joint sessions of this Section with other Sections may be held, due arrangements having been made by the officers.

## CHAPTER VII.—ORDER OF BUSINESS

**Article I. At First Session.** The order of business at the First Session shall be as follows: (1) Call to Order; (2) Chairman's Address; (3) Secretary's Report; (4) Reports of Standing Committees and Committees of the ASSOCIATION which report to this Section; (5) Appointment Committee on Nominations; (6) Miscellaneous Business; (7) Reading of Papers.

**Article II. Other Sessions.** The time of the other sessions shall be taken up with the reading of papers, excepting as provided for in Chapter IV (Election of Officers) and Chapter X (Amendments), or to hear the reports of special committees.

**Article III. Referred Business.** Provided, however, that discussion of papers may be interrupted at any time to consider matters referred to the Section by the ASSOCIATION in general session or by the Council or by the House of Delegates.

**Article IV. Suspension of Order.** This regular order of business may be suspended at any time during a session, for that particular session, by a three-fourths vote of those present.

## CHAPTER VIII.—EXPENSES

**Article I. Appropriations for Regular.** The expense of printing, postage and stationery shall be paid from the ASSOCIATION treasury, but in no case to exceed $25.00 for one year.

**Article II. Appropriations for Additional.** Appropriations for expenses other than those named here must be procured by authority of the Council through its Chairman of the Section.

## CHAPTER IX.—PAPERS

**Article I. Acceptance.** Original papers on any subject of scientific interest may be accepted at the discretion of the officers of the Section.

**Article II. Title and Abstract.** The complete title and a brief abstract of all papers, not to exceed 250 words, must be in the hands of the Secretary in time for inclusion in the program, which is published as provided in Chapter V, Article III.

**Article III. Time for Reading.** Ten minutes shall be allowed for the reading of a paper. If the paper is too lengthy to be read in detail within this space of time, it shall be presented in abstract.

**Article IV. Maximum Time.** The maximum time for the presentation of a paper may be reduced at any session by a majority of the members present.

**Article V. Discussion.** Each speaker in the discussion of a paper shall be allowed five minutes but the total time allowed for the discussion of any one paper shall not exceed 10 minutes.

**Article VI. Maximum Time.** The maximum time for the discussion of any papers may be reduced at any session by a majority vote of the members present.

**Article VII. Extension of Time.** The time allowed for presenting a paper or discussion may be extended by unanimous consent of those present.

**Article VIII. Disposal of Papers and Reports.** All papers and reports presented to the Section become the property of the ASSOCIATION and shall be forwarded to the Editor of the JOURNAL immediately following the annual meeting by the Secretary of the Section.

## CHAPTER X

**Article I. Amendments.** These By-Laws may be amended at any session of any annual meeting by a two-thirds vote of those present, provided notice of such amendment is given together with the text thereof at any previous session held at that meeting. Amendments must finally be accepted by the Council as not in conflict with the Constitution and By-Laws of the ASSOCIATION.

## CHAPTER XI

**Article I. Miscellaneous.** Questions not specifically covered by these By-Laws shall always be decided in accord with the Constitution and By-Laws of the ASSOCIATION.

# CERTIFICATE OF INCORPORATION OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

WHEREAS, we, the undersigned, desire to form an association having for its object to unite the educated and reputable Pharmacists and Druggists of America, as will more fully hereinafter appear;

Now, therefore, we do hereby certify as follows:

First: The corporate name of the ASSOCIATION is the AMERICAN PHARMACEUTICAL ASSOCIATION.

Second: The ASSOCIATION shall continue until dissolved by the action of its members, or by the operation of law.

Third: The objects and business of said ASSOCIATION are as follows:

(*a*) To improve and regulate the drug market, by preventing the importation of inferior, adulterated or deteriorated drugs, and by detecting and exposing home adulterations.

(*b*) To encourage proper relations between Druggists, Pharmacists, Physicians, and the people at large, which shall promote the public welfare, and tend to mutual strength and advantage.

(*c*) To improve the science and art of Pharmacy by diffusing scientific knowledge among Apothecaries and Druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and in encouraging home production and manufacture in the several departments of the drug business.

(*d*) To regulate the system of apprenticeship and employment, so as to prevent, so far as possible, the evils flowing from deficient training in the responsible duties of preparing, dispensing and selling medicines.

(*e*) To suppress empiricism, and to restrict the dispensing and sale of medicines to regularly educated Druggists and Apothecaries.

(*f*) To uphold standards of authority in the education, theory and practice of Pharmacy.

(*g*) To create and maintain a standard of professional honesty equal to the amount of our professional knowledge, with a view to the highest good and the greatest protection to the public.

Fourth: The concerns and affairs of the ASSOCIATION shall be managed by a Council, which shall consist for the first year of John U. Lloyd, Maurice W. Alexander, Alexander K. Finlay, Karl Simmon, Samuel A. D. Sheppard, John M. Maisch, James Vernor, C. Lewis Diehl, William H. Rogers, William Saunders, Albert E. Ebert, Philip C. Candidus, George W. Kennedy, Albert H. Hollister, James M. Good, Lewis C. Hopp and William Dupont.

Given under our respective hands and seals this 12th day of December, A.D. 1887.

Signed:

JOHN U. LLOYD,
ALEX. K. FINLAY,
SAMUEL A. D. SHEPPARD,
JAMES VERNOR,
WILLIAM H. ROGERS,
ALBERT E. EBERT,
GEORGE W. KENNEDY,
PHILIP C. CANDIDUS,
ALBERT H. HOLLISTER,
LEWIS C. HOPP,
JAMES M. GOOD,
MAURICE W. ALEXANDER,
KARL SIMMON,
JOHN M. MAISCH,
C. LEWIS DIEHL,
WM. SAUNDERS,
WILLIAM DUPONT,
*Members of the Council,*
and

JOHN A. MILBURN,
E. B. BURY,
W. S. THOMPSON,
CHARLES CHRISTIANI,
A. J. SCHAFHIRT,
O. H. COUMBE,
GEO. B. LOCKHART,
T. C. MURRAY,
JOSEPH R. WALTON,
G. G. C. SIMMS,
Z. W. CROMWELL,
JOHN R. MAJOR,
W. G. DUCKETT,
GEO. W. BOYD,
HENRY A. JOHNSTON,
W. C. MILBURN,
ARTHUR NATTANS,
THOMAS M. WEHRLY,
of the District of Columbia.

(Notaries' certificates attached to the original document attest the genuineness of each and every signature.)

Received for record February 21, 1888, at 1:05 P.M., and recorded in Liber No. 4, fol. 302 Acts of Incorporation, District of Columbia, and examined.

JAMES M. TROTTER, *Recorder*.

Signed:

SEAL:

Office of Recorder of Deeds,
District of Columbia,
Washington, D C.

# CODE OF ETHICS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

**(Adopted August 17, 1922)**

## CHAPTER I.—THE DUTIES OF THE PHARMACIST IN CONNECTION WITH HIS SERVICES TO THE PUBLIC

Pharmacy has for its primary object the service which it can render to the public in safe-guarding the handling, sale, compounding and dispensing of medicinal substances.

The practice of pharmacy demands knowledge, skill and integrity on the part of those engaged in it. Pharmacists are required to pass certain educational tests in order to qualify under the laws of our states. The states thus restrict the practice of pharmacy to those persons who by reason of special training and qualifications are able to qualify under regulatory requirements and grant to them privileges necessarily denied to others.

In return the states expect the Pharmacist to recognize his responsibility to the community and to fulfil his professional obligations honorably and with due regard for the physical and moral well-being of society.

The Pharmacist should uphold the approved legal standards of the United States Pharmacopœia and the National Formulary for articles which are official in either of these works, and should, as far as possible, encourage the use of these official drugs and preparations and discourage the use of objectionable nostrums.[1] He should sell and dispense only drugs of the best quality for medicinal use and for filling prescriptions.

He should neither buy, sell nor use substandard drugs for uses which are in any way connected with medicinal purposes.

The Pharmacist should be properly remunerated by the public for his knowledge and skill when used in its behalf in compounding prescriptions, and his fee for such professional work should take into account the time consumed and the great responsibility involved as well as the cost of the ingredients.

The Pharmacist should not sell or dispense powerful drugs and poisons to persons not properly qualified to administer or use them, and should use every proper precaution to safeguard the public from poisons and from all habit-forming medicines.

The Pharmacist, being legally entrusted with the dispensing and sale of narcotic drugs and alcoholic liquors, should merit this responsibility by upholding and conforming to the laws and regulations governing the distribution of these substances.

The Pharmacist should seek to enlist and merit the confidence of his patrons and when this confidence is won it should be jealously guarded and never abused by extortion or misrepresentation or in any other manner.

The Pharmacist should consider the knowledge which he gains of the ailments of his patrons and their confidences regarding these matters, as entrusted to his honor, and he should never divulge such facts unless compelled to do so by law.

The Pharmacist should hold the health and safety of his patrons to be of first consideration; he should make no attempt to prescribe or treat diseases or strive to sell drugs or remedies of any kind simply for the sake of profit.

He should keep his pharmacy clean, neat and sanitary in all its departments and should be well supplied with accurate measuring and weighing devices and other suitable apparatus for the proper performance of his professional duties.

It is considered inimical to public welfare for the Pharmacist to have any clandestine arrangement with any Physician in which fees are divided or in which secret prescriptions are concerned.

The Pharmacist should primarily be a good citizen, and should uphold and defend the laws of the state and nation. He should inform himself concerning the laws, particularly those relating to food and drug adulteration and those pertaining to health and sanitation, and should always be ready to cooperate with the proper authorities having charge of the enforcement of the laws.

The Pharmacist should be willing to join any constructive effort to promote the public welfare and he should regulate his public and private conduct and deeds so as to entitle him to the respect and confidence of the community in which he practices.

[1] An objectionable nostrum is one which does not meet the requirements of the definition of the Commission on Proprietary Medicines of the AMERICAN PHARMACEUTICAL ASSOCIATION.

## CHAPTER II.—THE DUTIES OF THE PHARMACIST IN HIS RELATIONS TO THE PHYSICIAN

The Pharmacist even when urgently requested so to do should always refuse to prescribe or attempt diagnoses. He should, under such circumstances, refer applicants for medical aid to a reputable legally qualified Physician. In cases of extreme emergency as in accident or sudden illness on the street in which persons are brought to him pending the arrival of a Physician, such prompt action should be taken to prevent suffering as is dictated by humanitarian impulses and guided by scientific knowledge and common sense.

The Pharmacist should not, under any circumstances, substitute one article for another, or one make of an article for another in a prescription, without the consent of the Physician who wrote it. No change should be made in a Physician's prescription except such as is essentially warranted by correct pharmaceutical procedure, nor any that will interfere with the obvious intent of the prescriber, as regards therapeutic action.

He should follow the Physician's directions explicitly in the matter of refilling prescriptions, copying the formula upon the label or giving a copy of the prescription to the patient. He should not add any extra directions or caution on poison labels without due regard for the wishes of the prescriber, providing the safety of the patient is not jeopardized.

Whenever there is doubt as to the interpretation of the Physician's prescription or directions, he should invariably confer with the Physician in order to avoid a possible mistake or an unpleasant situation.

He should never discuss the therapeutic effect of a Physician's prescription with a patron nor disclose details of composition which the Physician has withheld, suggesting to the patient that such details can be properly discussed with the prescriber only.

Where an obvious error or omission in a prescription is detected by the Pharmacist, he should protect the interests of his patron and also the reputation of the Physician by conferring confidentially upon the subject, using the utmost caution and delicacy in handling such an important matter.

## CHAPTER III.—THE DUTIES OF PHARMACISTS TO EACH OTHER AND TO THE PROFESSION AT LARGE

The Pharmacist should strive to perfect and enlarge his professional knowledge. He should contribute his share toward the scientific progress of his profession and encourage and participate in research, investigation and study.

He should associate himself with pharmaceutical organizations whose aims are compatible with this code of ethics and to whose membership he may be eligible. He should contribute his share of time, energy and expense to carry on the work of these organizations and promote their welfare. He should keep himself informed upon professional matters by reading current pharmaceutical and medical literature.

He should perform no act, nor should he be a party to any transaction, which will bring discredit to himself or to his profession or in any way bring criticism upon it, nor should he unwarrantedly criticize a fellow Pharmacist or do anything to diminish the trust reposed in the practitioners of pharmacy.

The Pharmacist should expose any corrupt or dishonest conduct of any member of his profession which comes to his certain knowledge, through those accredited processes provided by the civil laws or the rules and regulations of pharmaceutical organizations, and he should aid in driving the unworthy out of the calling.

He should not accept agencies for objectionable nostrums nor allow his name to be used in connection with advertisements or correspondence for furthering their sale.

He should courteously aid a fellow Pharmacist who may request advice or professional information or who, in an emergency, needs supplies.

He should not aid any person to evade legal requirements regarding character, time or practical experience by carelessly or improperly endorsing or approving statements relating thereto.

He should not imitate the labels of his competitors nor take any other unfair advantage of merited professional or commercial success. When a bottle or package of a medicine is brought to him to be refilled, he should remove all other labels and place his own thereon unless the patron requests otherwise.

He should not fill orders which come to him by mistake, being originally intended for a competitor.

He should deal fairly with manufacturers and wholesale druggists from whom he purchases his supplies; all goods received in error or excess and all undercharges should be as promptly reported as are shortages and overcharges.

He should earnestly strive to follow all proper trade regulations and rules, promptly meet all obligations and closely adhere to all contracts and agreements.

# LIST OF OFFICERS OF THE ASSOCIATION SINCE ITS ORGANIZATION

*Names of deceased officers in italics.*

## PRESIDENTS AND LOCAL SECRETARIES

| Year | Place of Meeting and Date | Presidents and Local Secretaries |
|---|---|---|
| 1852 | Philadelphia, Pa., Oct. 6, 1852 | Organization Meeting |
| 1852-53 | Boston, Mass., Aug. 24, 1853 | *Daniel B. Smith*, Philadelphia, Pa. |
| 1853-54 | Cincinnati, O., July 25, 1854 | *William A. Brewer*, Boston, Mass. |
| 1854-55 | New York, N. Y., Sept. 11, 1855 | *William B. Chapman*, Cincinnati, O. |
| 1855-56 | Baltimore, Md., Sept. 9, 1856 | *John Meakim*, New York, N. Y. |
| 1856-57 | Philadelphia, Pa., Sept. 8, 1857 | *George W. Andrews*, Baltimore, Md. |
| 1857-58 | Washington, D. C., Sept. 14, 1858 | *Charles Ellis*, Philadelphia, Pa. |
| 1858-59 | Boston, Mass., Sept. 13, 1859 | *John I. Kidwell*, Georgetown, D. C. |
| 1859-60 | New York, N. Y., Sept. 11, 1860 | *Samuel M. Colcord*, Boston, Mass. |
| 1860-62 | Philadelphia, Pa., Aug. 27, 1862 | *Henry T. Kiersted*, New York, N. Y. |
| 1862-63 | Baltimore, Md., Sept. 8, 1863 | *Wm. Procter, Jr.*, Philadelphia, Pa. |
| 1863-64 | Cincinnati, O., Sept. 21, 1864 | *J. Faris Moore*, Baltimore, Md. |
| 1864-65 | Boston, Mass., Sept. 5, 1865 | *William J. M. Gordon*, Cincinnati, O. |
| 1865-66 | Detroit, Mich., Aug. 22, 1866 | *Henry W. Lincoln*, Boston, Mass. |
| 1866-67 | New York, N. Y., Sept. 10, 1867 | *Frederick Stearns*, Detroit, Mich., *P. Wendover Bedford* |
| 1867-68 | Philadelphia, Pa., Sept. 8, 1868 | *John Milhau*, New York, N. Y., *Alfred B. Taylor* |
| 1868-69 | Chicago, Ill., Sept. 7, 1869 | *Edward Parrish*, Philadelphia, Pa., *Henry W. Fuller* |
| 1869-70 | Baltimore, Md., Sept. 13, 1870 | *Ezekiel H. Sargent*, Chicago, Ill., *J. Faris Moore* |
| 1870-71 | St. Louis, Mo., Sept. 12, 1871 | *Richard H. Stabler*, Alexandria, Va., *William H. Crawford* |
| 1871-72 | Cleveland, O., Sept. 3, 1872 | *Enno Sander*, St. Louis, Mo., *Henry C. Gaylord* |
| 1872-73 | Richmond, Va., Sept. 16, 1873 | *Albert E. Ebert*, Chicago, Ill., *Thomas H. Hazard* |
| 1873-74 | Louisville, Ky., Sept. 8, 1874 | *John F. Hancock*, Baltimore, Md., *Emil Scheffer* |
| 1874-75 | Boston, Mass., Sept. 7, 1875 | *C. Lewis Diehl*, Louisville, Ky., *Samuel A. D. Sheppard* |
| 1875-76 | Philadelphia, Pa., Sept. 12, 1876 | *George F. H. Markoe*, Boston, Mass., *Adolphus W. Miller* |
| 1876-77 | Toronto, Can., Sept. 4, 1877 | *Charles Bullick*, Philadelphia, Pa., *Henry J. Rose* |
| 1877-78 | Atlanta, Ga., Nov. 26, 1878 | *William Saunders*, London, Ont., *Jesse W. Rankin* |
| 1878-79 | Indianapolis, Ind., Sept. 9, 1879 | *Gustavus J. Luhn*, Charleston, S. C., *Eli Lilly* |
| 1879-80 | Saratoga, N. Y., Sept. 14, 1880 | *George W. Sloan*, Indianapolis, Ind., *Charles F. Fish* |
| 1880-81 | Kansas City, Mo., Aug. 23, 1881 | *James T. Shinn*, Philadelphia, Pa., *William T. Ford* |
| 1881-82 | Niagara Falls, N. Y., Sept. 12, 1882 | *P. Wendover Bedford*, New York, N. Y., *Hiram E. Griffith* |
| 1882-83 | Washington, D. C., Sept. 11, 1883 | *Charles A. Heinitsh*, Lancaster, Pa., *Charles Becker* |
| 1883-84 | Milwaukee, Wis., Aug. 26, 1884 | *Wm. S. Thompson*, Washington, D. C., *Henry C. Schranck* |
| 1884-85 | Pittsburgh, Pa., Sept. 8, 1885 | *John Ingalls*, Macon, Ga., *George A. Kelley* |
| 1885-86 | Providence, R. I., Sept. 7, 1886 | *Joseph Roberts*, Baltimore, Md., *William B. Blanding* |
| 1886-87 | Cincinnati, O., Sept. 5, 1887 | *Chas. A. Tufts*, Dover, N. H., *George W. Voss* |
| 1887-88 | Detroit, Mich., Sept. 3, 1888 | *John U. Lloyd*, Cincinnati, O., *James Vernor* |
| 1888-89 | San Francisco, Cal., June 24, 1889 | *M. W. Alexander*, St. Louis, Mo., *Edward W. Runyon* |
| 1889-90 | Old Point Comfort, Va., Sept. 8, 1890 | *Emlen Painter*, New York, N. Y., *Charles E. Dohme* |
| 1890-91 | New Orleans, La., April 27, 1891 | *A. B. Taylor*, Philadelphia, Pa., *A. K. Finlay* |
| 1891-92 | Profile House, N. H., July 14, 1892 | *A. K. Finlay*, New Orleans, La., *H. M. Whitney* |
| 1892-93 | Chicago, Ill., Aug. 14, 1893 | *Jos. P. Remington*, Philadelphia, Pa., *Henry Biroth* |
| 1893-94 | Asheville, N. C., Sept. 3, 1894 | *Edgar L. Patch*, Boston, Mass., *W. G. Smith* |
| 1894-95 | Denver, Colo., Aug. 14, 1895 | *William Simpson*, Raleigh, N. C., *Edm. L. Scholtz* |
| 1895-96 | Montreal, Can., Aug. 12, 1896 | *James M. Good*, St. Louis, Mo., *Joseph E. Morrison* |
| 1896-97 | Lake Minnetonka, Minn., Aug. 23, 1897 | *Joseph E. Morrison*, Montreal, Can., *Edw. Shumpik* |
| 1897-98 | Baltimore, Md., Aug. 29, 1898 | *Henry M. Whitney*, Lawrence, Mass., *Henry P. Hynson* |
| 1898-99 | Put-in-Bay, O., Sept. 4, 1899 | *Charles E. Dohme*, Baltimore, Md., *Lewis C. Hopp* |
| 1899-00 | Richmond, Va., May 7, 1900 | *Albert B. Prescott*, Ann Arbor, Mich., *T. Ashby Miller* |
| 1900-01 | St. Louis, Mo., Sept. 16, 1901 | *Jno. F. Patton*, York, Pa., *H. M. Whelpley* |
| 1901-02 | Philadelphia, Pa., Sept. 8, 1902 | *Henry M. Whelpley*, St. Louis, Mo., *William L. Cliffe* |
| 1902-03 | Mackinac Island, Mich., Aug. 3, 1903 | *Geo. F. Payne*, Atlanta, Ga., *F. W. R. Perry* |
| 1903-04 | Kansas City, Mo., Sept. 5, 1904 | *Lewis C. Hopp*, Cleveland, O., *Joseph C. Wirthman* |
| 1904-05 | Atlantic City, N. J., Sept. 4, 1905 | *James H. Beal*, Scio, O., *William C. Westcott* |
| 1905-06 | Indianapolis, Ind., Sept. 3, 1906 | *Jos. L. Lemberger*, Lebanon, Pa., *Frank H. Carter* |
| 1906-07 | New York, N. Y., Sept. 2, 1907 | *Leo Eliel*, South Bend, Ind., *Thomas P. Cook* |
| 1907-08 | Hot Springs, Ark., Sept. 7, 1908 | *Wm. M. Searby*, San Francisco, Cal., *Martin A. Eisele* |
| 1908-09 | Los Angeles, Cal., Aug. 16, 1909 | *Oscar Oldberg*, Chicago, Ill., *Thomas W. Jones* |
| 1909-10 | Richmond, Va., May 2, 1910 | *Henry H. Rusby*, Newark, N. J., *T. Ashby Miller* |
| 1910-11 | Boston, Mass., Aug. 14, 1911 | *Eugene G. Eberle*, Dallas, Tex., *C. Herbert Packard* |
| 1911-12 | Denver, Colo., Aug. 19, 1912 | *John G. Godding*, Boston, Mass., *Charles M. Ford* |
| 1912-13 | Nashville, Tenn., Aug. 18, 1913 | *William B. Day*, Chicago, Ill., *James O. Burge* |
| 1913-14 | Detroit, Mich., Aug. 24, 1914 | *George M. Beringer*, Camden, N. J., *Leonard A. Seltzer* |
| 1914-15 | San Francisco, Cal., Aug. 9, 1915 | *Caswell A. Mayo*, New York, N. Y., *John H. Dawson* |
| 1915-16 | Atlantic City, N. J., Sept. 5, 1916 | *Wm. C. Alpers*, Cleveland, O., *Chas. Holzhauer* |
| 1916-17 | Indianapolis, Ind., Aug. 28, 1917 | *Fred J. Wulling*, Minneapolis, Minn., Francis E. Bibbins |
| 1917-18 | Chicago, Ill., Aug. 12, 1918 | *Charles Holzhauer*,* Newark, N. J., E. N. Gathercoal |
| 1918-19 | New York, N. Y., Aug. 25, 1919 | *Charles H. LaWall*, Philadelphia, Pa., Hugo H. Schaefer |

* Charles Holzhauer died during his term of office and was succeeded by A. R. L. Dohme, the first Vice-President.

| Year | Place of Meeting and Date | Presidents and Local Secretaries |
|---|---|---|
| 1919–20 | Washington, D. C., May 6, 1920 | *L. E. Sayre*, Lawrence, Kans., *S. L. Hilton* |
| 1920–21 | New Orleans, La., Sept. 6, 1921 | *C. Herbert Packard*, East Boston, Mass., *George W. McDuff* |
| 1921–22 | Cleveland, O., Aug. 14, 1922 | *Samuel L. Hilton*, Washington, D. C., Edward Spease |
| 1922–23 | Asheville, N. C., Sept. 4, 1923 | Julius A. Koch, Pittsburgh, Pa., *John G. Beard* |
| 1923–24 | Buffalo, N. Y., Aug. 25, 1924 | *H. V. Arny*, New York, N. Y., *W. G. Gregory* |
| 1924–25 | Des Moines, Ia., Aug. 24, 1925 | C. W. Holton, Newark, N. J., E. O. Kagy |
| 1925–26 | Philadelphia, Pa., Sept. 13, 1926 | *L. L. Walton*, Williamsport, Pa., *Ambrose Hunsberger* |
| 1926–27 | St. Louis, Mo., Aug. 22, 1927 | *T. J. Bradley*, Boston, Mass., *A. We Pauley* |
| 1927–28 | Portland, Me., Aug. 20–25, 1928 | *C. W. Johnson*, Seattle, Wash., E. F. Carswell |
| 1928–29 | Rapid City, S. Dak., Aug. 26–31, 1929 | *D. F. Jones*, Watertown, S. Dak., Floyd W. Brown |
| 1929–30 | Baltimore, Md., May 5–10, 1930 | H. A. B. Dunning, Baltimore, Md., *S. Y. Harris* |
| 1930–31 | Miami, Fla., July 27–Aug. 1, 1931 | *H. C. Christensen*, Chicago, Ill., G. H. Grommet |
| 1931–32 | Toronto, Can., Aug. 22–27, 1932 | Walter D. Adams, Forney, Tex., *R. B. J. Stanbury* |
| 1932–33 | Madison, Wis., Aug. 26–Sept. 1, 1933 | *W. Bruce Philip*, Washington, D. C., Emerson D. Stanley |
| 1933–34 | Washington, D. C., May 5–12, 1934 | Robert L. Swain, Baltimore, Md., Frank A. Delgado, Washington, D. C. |
| 1934–35 | Portland, Ore., Aug. 5–10, 1935 | Robert P. Fischelis, Trenton, N. J., *A. O. Mickelsen*, Portland, Ore. |
| 1935–36 | Dallas, Tex., Aug. 24–29, 1936 | Patrick H. Costello, Cooperstown, N. Dak., Walter D. Adams, Dallas, Tex. |
| 1936–37 | New York, N. Y., Aug. 16–21, 1937 | George D. Beal, Pittsburgh, Pa., Hugo H. Schaefer, New York, N. Y. |
| 1937–38 | Minneapolis, Minn., Aug. 22–27, 1938 | E. N. Gathercoal, Chicago, Ill., Chas. H. Rogers, Minneapolis, Minn. |
| 1938–39 | Atlanta, Ga., Aug. 20–26, 1939 | *J. Leon Lascoff*, New York, N. Y., R. C. Wilson, Atlanta, Ga. |
| 1939–40 | Richmond, Va., May 7–11, 1940 | *A. G. DuMez*, Baltimore, Md., L. C. Bird, Richmond, Va. |
| 1940–41 | Detroit, Mich., Aug. 17–23, 1941 | Charles H. Evans, Warrenton, Ga., Bernard A. Bialk, Detroit, Mich. |
| 1941–42 | Denver, Colo., Aug. 16–22, 1942 | B. V. Christensen, Columbus, O., Paul G. Stodghill, Denver, Colo. |
| 1942–43 | Columbus, O., Sept. 9–11, 1943 | Roy Bird Cook, Charleston, W. Va., B. V. Christensen, Columbus, O. |
| 1943–44 | Cleveland, O., Sept. 7–9, 1944 | Ivor Griffith, Philadelphia, Pa., A. P. Gegenheimer, Cleveland, O. |
| 1944–45 | No meeting | Geo. A. Moulton Peterborough, N. H. |
| 1945–46 | Pittsburgh, Pa., Aug. 27–30, 1946 | Geo. A. Moulton, Peterborough, N. H., Stephen Wilson, Pitsburgh, Pa. |
| 1946–47 | Milwaukee, Wis., Aug. 26–30, 1947 | Earl R. Serles, Chicago, Ill., Walter A. Koepke, Milwaukee, Wis. |
| 1947–48 | San Francisco, Cal., Aug. 8–14, 1948 | Sylvester H. Dretzka, Milwaukee, Wis., Linnet M. Walsh, Burlingame Calif. |
| 1948–49 | Jacksonville, Fla., April 24–30, 1949 | Ernest Little, Newark, N. J., J. K. Attwood, Jacksonville, Fla. |
| 1949–50 | Atlantic City, N. J., April 30–May 5, 1950 | Glenn L. Jenkins, Lafayette, Ind. |
| 1950–51 | | Henry H. Gregg, Minneapolis, Minn. |

## HONORARY PRESIDENTS

| | | | | | |
|---|---|---|---|---|---|
| 1907–08 | *Philip C. Candidus*, Mobile, Ala. | 1921–22 | *John C. Wallace*, Newcastle, Pa. | 1935–36 | *D. M. R. Culbreth*, Baltimore, Md. |
| 1908–09 | *Samuel A. D. Sheppard*, Boston, Mass. | 1922–23 | *Thomas D. McElhenie*, Brooklyn, N. Y. | 1936–37 | *W. G. Gregory*, Buffalo, N. Y. |
| 1909–10 | *Enno Sander*, St. Louis, Mo. | 1923–24 | *William L. DuBois*, Catskill, N. Y. | 1937–38 | *H. G. Ruenzel*, Milwaukee, Wis. |
| 1910–11 | *Ewen McIntyre*, New York, N. Y. | 1924–25 | *Louis Emanuel*, Pittsburgh, Pa. | 1938–39 | *W. C. Anderson*, Brooklyn, N. Y. |
| 1911–12 | *Henry Biroth*, Chicago, Ill. | 1925–26 | *W. A. Frost*, St. Paul, Minn. | 1939–40 | *J. W. Gayle*, Frankfort, Ky. |
| 1912–13 | *Thomas F. Main*, New York, N. Y. | 1926–27 | *W. H. Rogers*, Middletown, N. Y. | 1940–41 | *W. P. Porterfield*, Fargo, N. Dak. |
| 1913–14 | *Albert B. Lyons*, Detroit, Mich. | 1927–28 | *Edward Mallinckrodt*, St. Louis, Mo. | 1941–42 | *J. C. Peacock*, Philadelphia, Pa. |
| 1914–15 | *Geo. H. Schafer*, E. Madison, Ia. | 1928–29 | *F. E. Stewart* Philadelphia, Pa. | 1942–43 | *James E. Hancock*, Baltimore, Md. |
| 1915–16 | *Fabius C. Godbold* New Orleans, La. | 1929–30 | *E. V. Zoeller*, Tarboro, N. C. | 1943–44 | George Judisch, Ames, Ia. |
| 1916–17 | *J. O. Burge*, Nashville, Tenn. | 1930–31 | *Elie H. La Pierre*, Cambridge, Mass. | 1944–45 | *L. A. Seltzer* Detroit, Mich. |
| 1917–18 | *W. L. Dewoody*, Pine Bluff, Ark. | 1931–32 | *Henry S. Wellcome*, London, England | 1945–46 | *L. A. Seltzer* |
| 1918–19 | *Oliver F. Fuller*, Chicago, Ill. | 1932–33 | *Charles F. Heebner*, Toronto, Can. | 1946–47 | A. C. Taylor, Wash., D. C. |
| 1919–20 | *Alviso B. Stevens*, Escondido, Cal. | 1933–34 | *Edward Kremers*, Madison, Wis. | 1947–48 | Gustavus A. Pfeiffer, New York, N. Y. |
| 1920–21 | *John F. Hancock*, Baltimore, Md. | 1934–35 | *J. K. Lilly*, Indianapolis, Ind. | 1948–49 | John Culley, Ogden, Utah |
| | | | | 1949–50 | Robert C. Wilson, Athens, Ga. |

## VICE-PRESIDENTS

| Year | First Vice-Presidents | Second Vice-Presidents | Third Vice-Presidents |
|---|---|---|---|
| 1852–53 | *George W. Andrews* Baltimore, Md. | *Samuel M. Colcord*, Boston, Mass. | *C. Augustus Smith*, Cincinnati, O. |
| 1853–54 | *George D. Coggeshall*, New York, N. Y. | *Alexander Duval*, Richmond, Va. | *Charles B. Guthrie*, Memphis, Tenn. |
| 1854–55 | *Henry T. Cummings*, Portland, Me. | *John Meakin*, New York, N. Y. | *Joseph Laidley*, Richmond, Va. |

| Year | First Vice-Presidents | Second Vice-Presidents | Third Vice-Presidents |
|---|---|---|---|
| 1855–56 | *Charles B. Guthrie*, Memphis, Tenn. | *Charles Ellis*, Philadelphia, Pa. | *Henry F. Fish*, Waterbury, Conn. |
| 1856–57 | *John I. Kidwell*, Washington, D. C. | *Frederick Stearns*, Detroit, Mich. | *Henry T. Kierstad*, New York, N. Y. |
| 1857–58 | *James Cooke*, Fredericksburg, Va. | *Samuel P. Peck*, Bennington, Vt. | *A. E. Richards*, Plaquemine, La. |
| 1858–59 | *Edward R. Squibb*, Brooklyn, N. Y. | *James O'Gallagher*, St. Louis, Mo. | *Robert Battey*, Rome, Ga. |
| 1859–60 | *William Procter, Jr.*, Philadelphia, Pa. | *Joseph Roberts*, Baltimore, Md. | *Edwin O. Gale*, Chicago, Ill. |
| 1860–62 | *William J. M. Gordon*, Cincinnati, O. | *William S. Thompson*, Baltimore, Md. | *Theodore Metcalf*, Boston, Mass. |
| 1862–63 | *John Milhau*, New York, N. Y. | *Eugene L. Massot*, St. Louis, Mo. | *J. Faris Moore*, Baltimore, Md. |
| 1863–64 | *John M. Maisch*, Philadelphia, Pa. | *Chas. A. Tufts*, Dover, N. H. | *George W. Weyman*, Pittsburgh, Pa. |
| 1864–65 | *Richard H. Stabler*, Alexandria, Va. | *Enno Sander*, St. Louis, Mo. | *Thomas Hollis*, Boston, Mass. |
| 1865–66 | *George C. Closs*, Brooklyn, N. Y. | *Elijah W. Sackrider*, Cleveland, O. | *Charles A. Heinitsh*, Lancaster, Pa. |
| 1866–67 | *Edward Parrish*, Philadelphia, Pa. | *Ezekiel H. Sargent*, Chicago, Ill. | *John W. Shedden*, New York, N. Y. |
| 1867–68 | *Robert J. Brown*, Leavenworth, Kans. | *N. Hynson Jennings*, Baltimore, Md. | *Daniel Henchman*, Boston, Mass. |
| 1868–69 | *Ferris Bringhurst*, Wilmington, Del. | *Edward S. Wayne*, Cincinnati, O. | *Albert E. Ebert*, Chicago, Ill. |
| 1869–70 | *Ferdinand W. Sennewald*, St. Louis, Mo. | *John J. Pope*, New Orleans, La. | *Joel S. Orne*, Cambridgeport, Mass. |
| 1870–71 | *Fleming G. Grieve*, Milledgeville, Ga. | *James G. Steele*, San Francisco, Cal. | *Eugene L. Massot*, St. Louis, Mo. |
| 1871–72 | *C. Lewis Diehl*, Louisville, Ky. | *George F. H. Markoe*, Boston, Mass. | *Matthew F. Ash*, Jackson, Miss. |
| 1872–73 | *Samuel S. Garrigues*, E. Saginaw, Mich. | *Edward P. Nichols*, Newark, N. J. | *Henry C. Gaylord*, Cleveland, O. |
| 1873–74 | *William Saunders*, London, Ont. | *John T. Buck*, Jackson, Miss. | *Paul Balluff*, New York, N. Y. |
| 1874–75 | *Joseph Roberts*, Baltimore, Md. | *William T. Wenzell*, San Francisco, Cal. | *Augustus R. Bayley*, Cambridgeport, Mass. |
| 1875–76 | *Frederick Hoffman*, New York, N. Y. | *T. Roberts Baker*, Richmond, Va. | *Christian F. G. Meyer*, St. Louis, Mo. |
| 1876–77 | *Samuel A. D. Sheppard*, Boston, Mass. | *Gustavus J. Luhn*, Charleston, S. C. | *Jacob D. Wells*, Cincinnati, O. |
| 1877–78 | *Ewen McIntyre*, New York, N. Y. | *John Ingalls*, Macon, Ga. | *Emlen Painter*, San Francisco, Cal. |
| 1878–79 | *Frederick T. Whiting*, Great Barrington, Mass. | *Henry J. Rose*, Toronto, Can. | *William H. Crawford* St. Louis, Mo. |
| 1879–80 | *T. Roberts Baker*, Richmond, Va. | *Joseph L. Lemberger*, Lebanon, Pa. | *Philip C. Candidus*, Mobile, Ala. |
| 1880–81 | *George H. Schafer*, Fort Madison, Ia. | *William S. Thompson*, Washington, D. C. | *William Simpson*, Raleigh, N. C. |
| 1881–82 | *Emlen Painter*, San Francisco, Cal. | *George Leis*, Lawrence, Kans. | *John F. Judge*, Cincinnati, O. |
| 1882–83 | *John Ingalls*, Macon, Ga. | *Louis Dohme*, Baltimore, Md. | *William B. Blanding*, Providence, R. I. |
| 1883–84 | *Charles Rice*, New York, N. Y. | *Frederick H. Massi*, Norfolk, Va. | *Edward W. Runyon* San Francisco, Cal |
| 1884–85 | *John A. Dadd*, Milwaukee, Wis. | *Henry Canning*, Boston, Mass. | *Charles F. Goodman*, Omaha, Nebr. |
| 1885–86 | *Albert H. Hollister*, Madison, Wis. | *Albert B. Prescott*, Ann Arbor, Mich. | *Joseph S. Evans*, West Chester, Pa. |
| 1886–87 | *Henry J. Menninger*, Brooklyn, N. Y. | *M. W. Alexander*, St. Louis, Mo. | *Norman A. Kuhn*, Omaha, Nebr. |
| 1887–88 | *M. W. Alexander*, St. Louis, Mo. | *A. K. Finlay*, New Orleans, La. | *Karl Simmon*, St. Paul, Minn. |
| 1888–89 | *James Vernor*, Detroit, Mich. | *Fred Wilcox*, Waterbury, Conn. | *Alvin A. Yeager*, Knoxville, Tenn. |
| 1889–90 | *Karl Simmon*, St. Paul, Minn. | *Wm. M. Searby*, San Francisco, Cal. | *Joseph W. Eckford*, Aberdeen, Miss. |
| 1890–91 | *A. B. Stevens*, Ann Arbor, Mich. | *Chas. E. Dohme*, Baltimore, Md. | *James M. Good*, St. Louis, Mo. |
| 1891–92 | *Geo. J. Seabury*, New York, N. Y. | *W. H. Torbert*, Dubuque, Ia. | *L. T. Dunning*, Sioux Falls, S. D. |
| 1892–93 | *A. P. Preston*, Portsmouth, N. H | *Sidney P. Watson*, Atlanta, Ga. | *Wm. H. Averill*, Frankfort, Ky. |
| 1893–94 | *Leo Eliel*, South Bend, Ind. | *Wiley Rogers*, Louisville, Ky. | *Chas. Caspari, Jr.* Baltimore, Md. |

| Year | First Vice-Presidents | Second Vice-Presidents | Third Vice-Presidents |
|---|---|---|---|
| 1894–95 | *Chas. M. Ford*, Denver, Colo. | *Jno. N. Hurty*, Indianapolis, Ind. | *Jas. E. Morrison*, Montreal, Can. |
| 1895–96 | *Chas. E. Dohme*, Baltimore, Md. | *A. Brandenburger*, Jefferson City, Mo. | *Mrs. M. O. Miner*, Hiawatha, Kans. |
| 1896–97 | *Geo. F. Payne*, Atlanta, Ga. | *Wm. A. Frost*, St. Paul, Minn. | *Geo. W. Parisen*, Perth Amboy, N. J. |
| 1897–98 | *George C. Bartells*, Camp Point, Ill. | *Wm. S. Thompson*, Washington, D. C. | *Jacob A. Miller*, Harrisburg, Pa. |
| 1898–99 | *George F. Payne*, Atlanta, Ga. | *James H. Beal*, Scio, O. | *Josie A. Wanous*, Minneapolis, Minn. |
| 1899–00 | *Lewis C. Hopp*, Cleveland, O. | *Wm. L. Dewoody*, Pine Bluff, Ark. | *Henry R. Gray*, Montreal, Can. |
| 1900–01 | *James H. Beal*, Scio, O. | *Jno. W. Gayle*, Frankfort, Ky. | E. A. Ruddiman, Nashville, Tenn. |
| 1901–02 | *Wm. M. Searby*, San Francisco, Cal. | *George F. Payne*, Atlanta, Ga. | *Wm. S. Thompson*, Washington, D. C. |
| 1902–03 | *Wm. L. Cliffe*, Philadelphia, Pa. | *Eugene G. Eberle*, Dallas, Tex. | *Henry Willis*, Quebec, Can. |
| 1903–04 | *Wm. C. Alpers*, New York, N. Y. | *Albert M. Roehrig*, Stapleton, N. Y. | *Otto F. Claus*, St. Louis, Mo. |
| 1904–05 | *Philip C. Candidus*, Mobile, Ala. | *Wm. Mittelbach*, Boonville, Mo. | Julius A. Koch, Pittsburgh, Pa. |
| 1905–06 | *Chas. Holzhauer*, Newark, N. J. | Chas. A. Rapelye, Hartford, Conn. | *Fabius C. Godbold*, New Orleans, La. |
| 1906–07 | *Wm. Mittelbach*, Boonville, Mo. | *C. S. N. Hallberg*, Chicago, Ill. | *Thomas P. Cook*, New York, N. Y. |
| 1907–08 | *Oscar Oldberg*, Chicago, Ill. | *Henry H. Rusby*, New York, N. Y. | *Oscar W. Bethea*, Meridian, Miss. |
| 1908–09 | *Eugene G. Eberle*, Dallas, Tex. | *Wm. Mittelbach*, Boonville, Mo. | *James H. Beal*, Scio, O. |
| 1909–10 | *Clement B. Lowe*, Philadelphia, Pa | *Chas. W. Johnson*, Seattle, Wash. | *Wm. B. Day*, Chicago, Ill. |
| 1910–11 | *Wm. B. Day*, Chicago, Ill. | *Otto F. Claus*, St. Louis, Mo. | *Leonard A. Seltzer* Detroit, Mich. |
| 1911–12 | *W. Bodemann*, Chicago, Ill. | *Chas. M. Ford*, Denver, Colo. | Ernest Berger, Tampa, Fla. |
| 1912–13 | *Chas. M. Ford*, Denver, Colo. | *Caswell A. Mayo*, New York, N. Y. | *C. Herbert Packard*, East Boston, Mass. |
| 1913–14 | *Franklin M. Apple*, Philadelphia, Pa. | *Wm. S. Richardson*, Washington, D. C. | L. D. Havenhill, Lawrence, Kans. |
| 1914–15 | L. D. Havenhill, Lawrence, Kans. | *C. Herbert Packard*, East Boston, Mass. | *Charles Gietner*, St. Louis, Mo. |
| 1915–16 | *C. H. LaWall*, Philadelphia, Pa. | E. A. Ruddiman, Nashville, Tenn. | Linwood A. Brown, Lexington, Ky. |
| 1916–17 | *Leonard A. Seltzer*, Detroit, Mich. | *Lucius E. Sayre*, Lawrence, Kans. | *Philip Asher*, New Orleans, La. |
| 1917–18 | Alfred R. L. Dohme, Baltimore, Md. | *Leonard A. Seltzer*, Detroit, Mich. | *Theodore J. Bradley*, Boston, Mass. |
| 1918–19 | F. W. Nitardy, Brooklyn, N. Y. | *Theodore J. Bradley*, Boston, Mass. | *Francis Hemm*, St. Louis, Mo. |
| 1919–20 | *Theo. J. Bradley*, Boston, Mass. | Harry Whitehouse, Johnson City, Tenn. | E. Fullerton Cook, Philadelphia, Pa. |
| 1920–21 | E. Fullerton Cook, Philadelphia, Pa. | *Charles E. Caspari*, St. Louis, Mo. | *W. P. Porterfield*, Fargo, N. D. |
| 1921–22 | *Charles E. Caspari*, St. Louis, Mo. | *David F. Jones* Watertown, S. D. | H. H. Schaefer, New York, N. Y. |
| 1922–23 | E. N. Gathercoal, Chicago, Ill. | Lyman F. Kebler, Washington, D. C. | Clyde L. Eddy, New York, N. Y. |
| 1923–24 | L. F. Kebler, Washington, D. C. | F. E. Bibbins, Indianapolis, Ind. | *W. Bruce Philip*, San Francisco, Cal. |
| 1924–25 | Paul S. Pittinger, Philadelphia, Pa. | William Mansfield, Delmar, N. Y. | |
| 1925–26 | *W. C. Anderson*, Brooklyn, N. Y. | C. L. Eddy, New York, N. Y. | |
| 1926–27 | George Judisch, Ames, Ia. | *A. G. Hulett*, Phoenix, Ariz. | |
| 1927–28 | *Ambrose Hunsberger*, Philadelphia, Pa. | *Joseph Jacobs*, Atlanta, Ga. | |
| 1928–29 | *A. W. Pauley*, St. Louis, Mo. | *W. H. Ziegler*, Charleston, S. C. | |
| 1929–30 | A. L. I. Winne, Richmond, Va. | W. B. Goodyear, Harrisburg, Pa. | |
| 1930–31 | Walter D. Adams, Forney, Tex. | D. B. R. Johnson, Norman, Okla. | |
| 1931–32 | *J. G. Beard*, Chapel Hill, N. C. | John W. Dargavel, Minneapolis, Minn. | |

| Year | First Vice-Presidents | Second Vice-Presidents | Third Vice-Presidents |
|---|---|---|---|
| 1932-33 | Rowland Jones, Jr. Gettysburg, S. Dak. | G. H. Grommet, Miami, Fla. | |
| 1933-34 | Robert P. Fischelis, Trenton, N. J. | J. C. Krantz, Jr. Baltimore, Md. | |
| 1934-35 | Geo. D. Beal, Pittsburgh, Pa. | Oscar Rennebohm, Madison, Wis. | |
| 1935-36 | F. A. Delgado, Washington, D. C. | J. Lester Hayman, Morgantown, W. Va. | |
| 1936-37 | *J. Leon Lascoff* New York, N. Y. | James C. Munch, Lansdowne, Pa. | |
| 1937-38 | W. Mac Childs, Eldorado, Kans. | Glenn L. Jenkins, Minneapolis, Minn. | |
| 1938-39 | *A. O. Mickelsen*, Portland, Ore. | Geo. A. Moulton, Peterborough, N. H. | |
| 1939-40 | F. O. Taylor, Detroit, Mich. | *F. J. Cermak*, Cleveland, O. | |
| 1940-41 | H. A. K. Whitney, Ann Arbor, Mich. | Henry H. Gregg, Minneapolis, Minn. | |
| 1941-42 | J. K. Attwood, Jacksonville, Fla. | L. W. Rowe, Detroit, Mich. | |
| 1942-43 | Donald A. Clarke, New York, N. Y. | C. O. Lee, Lafayette, Ind. | |
| 1943-44 | P. G. Stodghill, Denver, Colo. | *J. G. Beard*, Chapel Hill, N.C. | |
| 1944-46 | C. E. Wilson Corinth, Miss. | *R. S. Lehman* Brooklyn, N. Y. | |
| 1946-47 | A. Lee Adams Glencoe, Ill. | H. V. Darnell, Indianapolis, Ind. | |
| 1947-48 | Augustus J. Affleck Sacramento, Calif. | Roy L. Sanford, Enid, Okla. | |
| 1948-49 | Mearl D. Pritchard, Buffalo, N. Y. | Frederick D. Lascoff, New York, N. Y. | |
| 1949-50 | Harold C. Kinner, Washington, D. C. | Leib L. Riggs, Portland, Ore. | |
| 1950-51 | Roy A. Bowers, Albuquerque, N. M. | Louis J. Fischl, Oakland, Calif. | |

## TREASURERS

| | | | | | |
|---|---|---|---|---|---|
| 1852-54 | *Alfred B. Taylor*, Philadelphia, Pa. | 1860-63 | *Henry Haviland*, New York, N. Y. | 1908-21 | *Henry M. Whelpley*, St. Louis, Mo. |
| 1854-56, 1857-59 | *Samuel L. Colcord*, Boston, Mass. | 1863-65 | *J. Brown Baxley*, Baltimore, Md. | 1921-25 | *E. F. Kelly*, Baltimore, Md. |
| 1856-57 | *James S. Aspinwall*, New York, N. Y. | 1865-86 | *Charles A. Tufts*, Dover, N. H. | 1925-41 | C. W. Holton, Essex Fells, N. J. |
| 1859-60 | *Ashel Boyden*, Boston, Mass. | 1886-1908 | *S. A. D. Sheppard*, Boston, Mass. | 1941- | Hugo H. Schaefer, 600 Lafayette Ave., Brooklyn, N. Y. |

## SECRETARIES

| Recording Secretaries | | Corresponding Secretaries | | General Secretaries | |
|---|---|---|---|---|---|
| 1855-59 | *William J. M. Gordon*, Cincinnati, O. | 1852-53, 1854-57 | *William Procter, Jr.*, Philadelphia, Pa. | 1863-93 | *John M. Maisch*, Philadelphia, Pa. |
| 1859-60 | *Charles Bullock*, Philadelphia, Pa. | 1853-54 | *William B. Chapman*, Cincinnati, O. | 1893 | *Henry M. Whelpley*, St. Louis (Acting) |
| 1860-62 | *James T. Shinn*, Philadelphia, Pa. | 1857-58 | *Edward Parrish*, Philadelphia, Pa. | 1893-94 | *Joseph P. Remington* Philadelphia, Pa. |
| 1862-63 | *Peter W. Bedford*, New York, N. Y. | 1858-59 | *Ambrose Smith*, Philadelphia, Pa. | 1894-1911 | *Chas. Caspari, Jr.* Baltimore, Md. |
| 1863-64 | *William Evans, Sr.* Philadelphia, Pa. | 1859-60 | *William Hegeman*, New York, N. Y. | 1911-14 | *James H. Beal*, Scio, O. |
| 1864-65 | *Henry N. Rittenhouse*, Philadelphia, Pa. | 1860-62, 1863-65 | *Peter W. Bedford*, New York, N. Y. | 1914-25 | *William B. Day*, Chicago, Ill. |
| | | 1862-63 | *John M. Maisch*, Philadelphia, Pa. | 1925-44 | *E. F. Kelly*, Washington, D. C. |
| | | | | 1945- | R. P. Fischelis, Washington, D. C. |

## EDITORS OF THE JOURNAL

| Scientific Edition | | | | Practical Pharmacy Edition | |
|---|---|---|---|---|---|
| 1912-14 | *J. H. Beal*, Scio, O. | 1940-42 | *A. G. DuMez* Baltimore, Md. | 1940-41 | *E. F. Kelly*, Washington, D. C. |
| 1914-15 | *E. C. Marshall*, Columbus, O. | 1942- | J. L. Powers Washington, D. C. | 1941-43 | R. W. Rodman, Washington, D. C |
| 1915-40 | *E. G. Eberle*, Washington, D. C. | | | 1943-48 | Glenn Sonnedecker, Washington, D. C |
| | | | | 1948- | R. P. Fischelis, Washington, D. C. |

## OFFICERS OF THE COUNCIL

| Year | Chairmen | Vice-Chairmen | Secretaries |
|---|---|---|---|
| 1880–81 | Jos. P. Remington | Joseph Roberts | George W. Kennedy |
| 1881–83 | Jos. P. Remington | Wm. J. M. Gordon | George W. Kennedy |
| 1883–84 | Jos. P. Remington | C. Lewis Diehl | George W. Kennedy |
| 1884–85 | Jos. P. Remington | John A. Dadd | George W. Kennedy |
| 1885–86 | Jos. P. Remington | C. Lewis Diehl | George W. Kennedy |
| 1886–87 | Wm. S. Thompson | H. J. Menninger | George W. Kennedy |
| 1887–88 | Wm. H. Rogers | Karl Simmon | George W. Kennedy |
| 1888–89 | Jas. M. Good | Emlen Painter | George W. Kennedy |
| 1889–92 | Jas. M. Good | Wm. S. Thompson | George W. Kennedy |
| 1892–94 | Jas. M. Good | H. M. Whitney | George W. Kennedy |
| 1894–95 | Wm. S. Thompson | H. M. Whitney | George W. Kennedy |
| 1895–96 | Wm. S. Thompson | Wm. C. Alpers | George W. Kennedy |
| 1896–1901 | Wm. S. Thompson | Jas. M. Good | George W. Kennedy |
| 1901–02 | A. B. Prescott | Chas. E. Dohme | George W. Kennedy |
| 1902–03 | James H. Beal | Lewis C. Hopp | Henry M. Whelpley |
| 1903–04 | James H. Beal | Leo Eliel | Henry M. Whelpley |
| 1904–05 | James H. Beal | Jos. L. Lemberger | Henry M. Whelpley |
| 1905–06 | James H. Beal | Wm. C. Alpers | Henry M. Whelpley |
| 1906–08 | James H. Beal | Albert M. Roehrig | Henry M. Whelpley |
| 1908–09 | Jos. P. Remington | Wm. S. Searby | Joseph W. England |
| 1909–10 | Fabius C. Godbold | Julius A. Koch | Joseph W. England |
| 1910–11 | James H. Beal | Henry H. Rusby | Joseph W. England |
| 1911–12 | Eugene G. Eberle | James M. Good | Joseph W. England |
| 1912–13 | Eugene G. Eberle | Fabius C. Godbold | Joseph W. England |
| 1913–16 | Eugene G. Eberle | J. G. Godding | Joseph W. England |
| 1916–19 | Lewis C. Hopp | S. L. Hilton | Joseph W. England |
| 1919–20 | Lewis C. Hopp | Charles H. LaWall | Joseph W. England |
| 1920–22 | Charles H. LaWall | Charles E. Caspari | A. G. DuMez |
| 1922–23 | S. L. Hilton | Charles E. Caspari | A. G. DuMez |
| 1923–24 | James H. Beal | Charles E. Caspari | R. P. Fischelis |
| 1924–25 | James H. Beal | S. L. Hilton | R. P. Fischelis |
| 1925–26 | S. L. Hilton | W. C. Anderson | E. F. Kelly |
| 1926–34 | S. L. Hilton | C. H. LaWall | E. F. Kelly |
| 1934–35 | S. L. Hilton | J. H. Beal | E. F. Kelly |
| 1935–37 | S. L. Hilton | H. C. Christensen | E. F. Kelly |
| 1937–38 | S. L. Hilton | George D. Beal | E. F. Kelly |
| 1938–39 | S. L. Hilton | Glenn L. Jenkins | E. F. Kelly |
| 1939–40 | S. L. Hilton | Glenn L. Jenkins | E. F. Kelly |
| 1940–41 | Glenn L. Jenkins | R. P. Fischelis | E. F. Kelly |
| 1941–42 | R. P. Fischelis | P. H. Costello | E. F. Kelly |
| 1942–43 | R. P. Fischelis | C. H. Evans | E. F. Kelly |
| 1943–45 | R. P. Fischelis | C. H. Evans | E. F. Kelly |
| 1945–46 | George D. Beal | C. H. Evans | R. P. Fischelis |
| 1946–47 | George D. Beal | Henry H. Gregg | R. P. Fischelis |
| 1947–48 | George D. Beal | George A. Moulton | R. P. Fischelis |
| 1948–49 | George D. Beal | George A. Moulton | R. P. Fischelis |
| 1949–50 | George D. Beal | George A. Moulton | R. P. Fischelis |

## OFFICERS OF THE HOUSE OF DELEGATES

| Year | Chairmen | First Vice-Chairmen | Second Vice-Chairmen | Secretaries |
|---|---|---|---|---|
| 1912–13 | W. C. Anderson | C. M. Snow | W. S. Richardson | Clarissa M. Roehr |
| 1913–14 | C. M. Snow | W. S. Richardson | O. F. Claus | R. A. Kuever |
| 1914–15 | W. S. Richardson | C. B. Jordan | H. M. Faser | Joseph Weinstein |
| 1915–16 | H. P. Hynson | F. W. Nitardy | O. F. Claus | Jeannot Hostmann |
| 1916–17 | J. H. Beal | S. C. Henry | O. F. Claus | Jeannot Hostmann |
| 1917–18 | S. C. Henry | O. F. Claus | S. L. Hilton | Jeannot Hostmann |
| 1918–19 | O. F. Claus | S. L. Hilton | E. F. Kelly | Jeannot Hostmann |
| 1919–20 | S. L. Hilton | E. F. Kelly | E. L. Newcomb | Jeannot Hostmann |
| 1920–21 | E. F. Kelly | J. G. Beard | Adam Wirth | Jeannot Hostmann |
| 1921–23 | E. F. Kelly | E. L. Newcomb | W. B. Philip | Jeannot Hostmann |
| 1922–23 | E. F. Kelly | E. L. Newcomb | W. B. Philip | Wm. B. Day |
| 1923–24 | L. L. Walton | W. Bruce Philip | | Wm. B. Day |
| 1924–25 | W. Bruce Philip | W. D. Jones | | Wm. B. Day |
| 1925–26 | W. D. Jones | Jacob Diner | | E. F. Kelly |
| 1926–27 | Jacob Diner | L. A. Seltzer | | E. F. Kelly |
| 1927–28 | L. A. Seltzer | Ambrose Hunsberger | | E. F. Kelly |
| 1928–29 | Ambrose Hunsberger | R. L. Swain | | E. F. Kelly |
| 1929–30 | R. L. Swain | C. B. Jordan | | E. F. Kelly |
| 1930–31 | C. B. Jordan | Thomas Roach | | E. F. Kelly |
| 1931–32 | Thomas Roach | J. W. Slocum | | E. F. Kelly |
| 1932–33 | J. W. Slocum | P. H. Costello | | E. F. Kelly |
| 1933–34 | P. H. Costello | S. A. Williams | | E. F. Kelly |
| 1934–35 | Rowland Jones, Jr | S. A. Williams | | E. F. Kelly |

| Year | Chairmen | First Vice-Chairmen | Second Vice-Chairmen | Secretaries |
|---|---|---|---|---|
| 1935–36 | Roy B. Cook | *C. Thurston Gilbert* | | *E. F. Kelly* |
| 1936–37 | Robert C. Wilson | A. F. Ludwig | | *E. F. Kelly* |
| 1937–38 | A. L. I. Winne | Ernest Little | | *E. F. Kelly* |
| 1938–39 | C. H. Rogers | R. A. Kuever | | *E. F. Kelly* |
| 1939–40 | M. N. Ford | *E. C. Severin* | | *E. F. Kelly* |
| 1940–41 | Hugo H. Schaefer | Charles L. Guthrie | | *E. F. Kelly* |
| 1941–42 | H. H. Gregg | C. L. O'Connell | | *E. F. Kelly* |
| 1942–43 | J. K. Attwood | Glenn L. Jenkins | | *E. F. Kelly* |
| 1943–44 | Glenn L. Jenkins | S. H. Dretzka | | *E. F. Kelly* |
| 1944–45 | S. H. Dretzka | E. L. Hammond | | *E. F. Kelly* |
| 1945–46 | S. H. Dretzka | E. L. Hammond | | R. P. Fischelis |
| 1946–47 | H. C. Muldoon | E. M. Josey | | R. P. Fischelis |
| 1947–48 | Charles H. Evans | Emil C. Horn | | R. P. Fischelis |
| 1948–49 | Bert Mull | Louis Fischl | | R. P. Fischelis |
| 1949–50 | R. Q. Richards | Newell W. Stewart | | R. P. Fischelis |

## OFFICERS OF THE SECTIONS

### SCIENTIFIC SECTION

| Year | Chairmen | Secretaries | Year | Chairmen | Secretaries |
|---|---|---|---|---|---|
| 1887–88 | *T. Robert Baker* | *A. B. Lyons* | 1917–18 | *W. W. Stockberger* | H. C. Fuller |
| 1888–89 | *Emlen Painter* | *H. M. Whelpley* | 1918–19 | B. N. Gathercoal | *A. G. DuMez* |
| 1889–90 | *Henry M. Whelpley* | *C. F. Dare* | 1919–20 | *Jacob Diner* | *A. G. DuMez* |
| 1890–91 | *E. L. Patch* | *C. S. N. Hallberg* | 1920–21 | *A. G. DuMez* | H. W. Youngken |
| 1891–92 | *C. S. N. Hallberg* | *H. W. Snow* | 1921–22 | H. W. Youngken | Arno Viehoever |
| 1892–93 | *C. T. P. Fennel* | *F. G. Ryan* | 1922–23 | Arno Viehoever | J. P. Snyder |
| 1893–94 | *L. E. Sayre* | *C. M. Ford* | 1923–24 | J. P. Snyder | Paul S. Pittinger |
| 1894–95 | A. R. L. Dohme | *G. B. Kauffman* | 1924–25 | Paul S. Pittenger | F. F. Berg |
| 1895–96 | *S. P. Sadtler* | *W. C. Alpers* | 1925–26 | F. F. Berg | Paul S. Pittenger |
| 1896–97 | *W. C. Alpers* | *V. Coblentz* | 1926–27 | J. C. Krantz | Paul S. Pittenger |
| 1897–98 | *Edward Kremers* | *A. B. Lyons* | 1927–28 | L. W. Rowe | Paul S. Pittenger |
| 1898–99 | *Henry H. Rusby* | *H. V. Arny* | 1928–29 | J. C. Munch | L. W. Rowe |
| 1899–00 | *Frank G. Ryan* | *Caswell A. Mayo* | 1929–30 | H. A. Langenhan | L. W. Rowe |
| 1900–01 | *Oscar Oldberg* | Lyman F. Kebler | 1930–31 | E. E. Swanson | L. W. Rowe |
| 1901–02 | Lyman F. Kebler | *Jos. W. England* | 1931–32 | L. E. Warren | L. W. Rowe |
| 1902–03 | *J. O. Schlotterbeck* | *Jos. W. England* | 1932–33 | W. J. Husa | L. W. Rowe |
| 1903–04 | *W. A. Puckner* | *Eustace H. Gane* | 1933–34 | F. E. Bibbins | L. W. Rowe |
| 1904–05 | *Eustace H. Gane* | *C. E. Caspari* | 1934–35 | E. V. Lynn | F. E. Bibbins |
| 1905–06 | *C. E. Caspari* | *Daniel Base* | 1935–36 | H. M. Burlage | F. E. Bibbins |
| 1906–07 | Reid Hunt | *Virgil Coblentz* | 1936–37 | Glenn L. Jenkins | F. E. Bibbins |
| 1907–08 | *Virgil Coblentz* | Chas. E. Vanderkleed | 1937–38 | B. V. Christensen | F. E. Bibbins |
| 1908–09 | Chas. E. Vanderkleed | *Martin I. Wilbert* | 1938–39 | C. F. Lanwermeyer | F. E. Bibbins |
| 1909–10 | *Martin J. Wilbert* | *Albert H. Clark* | 1939–40 | J. C. Burt | F. E. Bibbins |
| 1910–11 | *Albert H. Clark* | *W. O. Richtmann* | 1940–41 | J. M. Dille | F. E. Bibbins |
| 1911–12 | *W. O. Richtmann* | *C. H. LaWall* | 1941–42 | W. H. Hartung | F. E. Bibbins |
| 1912–13 | *Frank R. Eldred* | Freeman P. Stroup | 1942–44 | Charles O. Wilson | F. E. Bibbins |
| 1913–14 | E. A. Ruddiman | *Wilbur L. Scoville* | 1945–46 | L. W. Hazleton | Ray S. Kelley |
| 1914–15 | *H. Engelhardt* | William Mansfield | 1946–47 | L. C. Zopf | Ray S. Kelley |
| 1915–16 | *W. L. Scoville* | E. L. Newcomb | 1947–48 | R. E. Anderson | Ray S. Kelley |
| 1916–17 | J. L. Turner | *W. W. Stockberger* | 1948–49 | Paul J. Jannke | Ray S. Kelley |
| | | | 1949–50 | Raymond P. Ahlquist | Ray S. Kelley |

### SECTION ON PRACTICAL PHARMACY AND DISPENSING

| Year | Chairmen | Secretaries | Year | Chairmen | Secretaries |
|---|---|---|---|---|---|
| 1900–01 | *H. P. Hynson* | F. W. E. Stedem | 1921–22 | Ivor Griffith | I. A. Becker |
| 1901–02 | F. W. E. Stedem | Wm. F. Kaemmerer | 1922–23 | C. R. Washburne | *Robert J. Ruth* |
| 1902–03 | *Geo. M. Beringer* | *William H. Burke* | 1923–24 | *R. J. Ruth* | *Wm. H. Ford* |
| 1903–04 | *William H. Burke* | E. A. Ruddiman | 1924–25 | John C. Krantz, Jr. | F. J. Blumenschein |
| 1904–05 | Charles A. Rapelye | *Wm. C. Kirchgessner* | 1925–26 | H. C. Newton | *Gustav Bachman* |
| 1905–06 | *Wm. C. Alpers* | H. A. B. Dunning | 1926–27 | A. B. Nichols | C. V. Netz |
| 1906–07 | H. A. B. Dunning | *Joseph Weinstein* | 1927–28 | A. B. Nichols | P. H. Dirstine |
| 1907–08 | *Franklin M. Apple* | *Joseph Weinstein* | 1928–29 | P. H. Dirstine | H. C. Newton |
| 1908–09 | *L. A. Seltzer* | E. F. Cook | 1929–30 | H. C. Newton | E. O. Leonard |
| 1909–10 | *O. Raubenheimer* | *Erich H. Ladish* | 1930–31 | Ralph E. Terry | W. Paul Briggs |
| 1910–11 | Louis Saalbach | *P. Henry Utech* | 1931–32 | *W. G. Crockett* | R. E. Terry |
| 1911–12 | *P. Henry Utech* | *J. Leon Lascoff* | 1932–33 | W. Paul Briggs | R. E. Terry |
| 1912–13 | *J. Leon Lascoff* | F. W. Nitardy | 1933–34 | M. J. Andrews | R. E. Terry |
| 1913–14 | F. W. Nitardy | *Cornelius Osseward* | 1934–35 | H. M. Burlage | L. W. Richards |
| 1914–15 | *Cornelius Osseward* | I. A. Becker | 1935–36 | L. W. Rising | L. W. Richards |
| 1915–16 | *Joseph Weinstein* | H. B. deCheverell | 1936–37 | H. A. K. Whitney | L. W. Richards |
| 1916–17 | *W. H. Glover* | David Stolz | 1937–38 | W. J. Husa | Louis C. Zopf |
| 1917–18 | *Josiah C. Peacock* | R. W. Terry | 1938–39 | L. W Richards | Louis C. Zopf |
| 1918–19 | R. W. Terry | Edward Davy | 1939–40 | R. W. Clark | Louis C. Zopf |
| 1919–20 | E. A. Ruddiman | Ivor Griffith | 1940–41 | Louis C. Zopf | Clark T. Eisdmor |
| 1920–21 | Ivor Griffith | H. M. Faser | | | |

## SECTION ON PRACTICAL PHARMACY

| Year | Chairmen | Secretaries |
|---|---|---|
| 1941–42 | W. H. Prout | Clark T. Eidsmoe |
| 1942–44 | E. P. Guth | R. W. Clark |
| 1944–46 | G. E. Crossen | A. P. Wyss |
| 1946–47 | J. S. Sprowls | Elmer M. Plein |
| 1947–48 | Charles V. Selby | Elmer M. Plein |
| 1948–49 | John Zugich | Elmer M. Plein |
| 1949–50 | Arthur P. Wyss | Elmer M. Plein |

## SECTION ON EDUCATION AND LEGISLATION

| Year | Chairmen | Secretaries |
|---|---|---|
| 1889–90 | *P. W. Bedford* | *A. B. Stevens* |
| 1890–91 | *William Simon* | *L. C. Hogan* |
| 1891–92 | *A. B. Stevens* | *L. C. Hogan* |
| 1892–93 | *R. G. Eccles* | *L. C. Hogan* |
| 1893–94 | *R. G. Eccles* | *L. C. Hogan* |
| 1894–95 | *James M. Good* | *C. S. N. Hallberg* |
| 1895–96 | *C. S. N. Hallberg* | *Jas. H. Beal* |
| 1896–97 | *C. S. N. Hallberg* | *Jas. H. Beal* |
| 1897–98 | *James H. Beal* | *H. G. Webster* |
| 1898–99 | *A. B. Lyons* | *C. B. Lowe* |
| 1899–00 | *C. B. Lowe* | J. A. Koch |
| 1900–01 | *C. B. Lowe* | J. A. Koch |
| 1901–02 | *E. G. Eberle* | J. W. T. Knox |
| 1902–03 | J. W. T. Knox | *Harry B. Mason* |
| 1903–04 | *Harry B. Mason* | *Wm. L. Cliffe* |
| 1904–05 | *Harry B. Mason* | *Wm. L. Cliffe* |
| 1905–06 | *Oscar Oldberg* | *Jos. W. England* |
| 1906–07 | *Oscar Oldberg* | *Jos. W. England* |
| 1907–08 | *Jos. W. England* | *C. H. LaWall* |
| 1908–09 | *Jos. W. England* | *C. H. LaWall* |
| 1909–10 | *C. H. LaWall* | *Chas. W. Johnson* |
| 1910–11 | *Chas. W. Johnson* | W. J. Teeters |
| 1911–12 | *John C. Wallace* | W. J. Teeters |
| 1912–13 | W. J. Teeters | *Frank H. Freericks* |
| 1913–14 | Hugh Craig | *Frank H. Freericks* |
| 1914–15 | *F. H. Freericks* | R. A. Kuever |
| 1915–16 | *F. H. Freericks* | R. A. Kuever |
| 1916–17 | R. A. Kuever | *C. B. Jordan* |
| 1917–18 | *C. B. Jordan* | W. F. Rudd |
| 1918–19 | W. F. Rudd | C. A. Dye |
| 1919–20 | C. A. Dye | Edward Spease |
| 1920–21 | Edward Spease | *W. H. Zeigler* |
| 1921–22 | *W. H. Zeigler* | W. F. Gidley |
| 1922–23 | W. F. Gidley | G. A. Bergy |
| 1923–24 | G. A. Bergy | William Mansfield |
| 1924–25 | William Mansfield | *J. G. Beard* |
| 1925–26 | *J. G. Beard* | H. M. Faser |
| 1926–27 | H. M. Faser | M. N. Ford |
| 1927–28 | M. N. Ford | A. L. I. Winne |
| 1928–29 | A. L. I. Winne | Glenn L. Jenkins |
| 1929–30 | Glenn L. Jenkins | R. H. Raabe |
| 1930–31 | B. V. Christensen | C. M. Anderson |
| 1931–32 | R. H. Raabe | C. W. Ballard |
| 1932–33 | W. H. Rivard | C. W. Ballard |
| 1933–34 | George C. Shicks | C. W. Ballard |
| 1934–35 | Oscar E. Russell | L. W. Rising |
| 1935–36 | C. Leonard O'Connell | G. A. Moulton |
| 1936–37 | George C. Schicks | John F. McCloskey |
| 1937–38 | Geo. A. Moulton | *A. O. Micklesen* |
| 1938–39 | J. F. McCloskey | Leslie M. Ohmart |
| 1939–40 | *A. O. Mickelsen* | R. T. Lakey |
| 1940–41 | Leslie M. Ohmart | F. J. Goodrich |
| 1941–42 | Leslie M. Ohmart | F. J. Goodrich |
| 1942–44 | E. J. Ireland | P. O. Clark |
| 1944–46 | W. F. Sudro | B. A. Bialk |
| 1946–47 | J. S. Lucas | B. A. Bialk |
| 1947–48 | James S. Hill | Ralph Clark |
| 1948–49 | B. A. Bialk | Ralph Clark |
| 1949–50 | Ralph W. Clark | David W. O'Day |

## SECTION ON COMMERCIAL INTERESTS

| Year | Chairmen | Secretaries |
|---|---|---|
| 1887–88 | *A. H. Hollister* | *J. W. Colcord* |
| 1888–89 | *A. H. Hollister* | *J. W. Colcord* |
| 1889–90 | *Leo Eliel* | *F. B. Kilmer* |
| 1890–91 | *Henry Canning* | *W. L. Dewoody* |
| 1891–92 | *W. H. Torbert* | Arthur Bassett |
| 1892–93 | *W. H. Torbert* | Arthur Bassett |
| 1893–94 | *Wiley Rogers* | *Jas. O. Burge* |
| 1894–95 | *Geo. J. Seabury* | *Jas. O. Burge* |
| 1895–96 | *Geo. J. Seabury* | *Clayton W. Holmes* |
| 1896–97 | *Lewis C. Hopp* | B. D'Avignon |
| 1897–98 | *Joseph Jacobs* | *Jas. H. Babbitt* |
| 1898–99 | *Joseph Jacobs* | *Jas. H. Babbitt* |
| 1899–00 | *James M. Good* | Charles A. Rapelye |
| 1900–01 | Charles A. Rapelye | *F. W. Meissner* |
| 1901–02 | *F. W. Meissner* | *E. G. Eberle* |
| 1902–03 | *T. V. Wooten* | *Wm. C. Anderson* |
| 1903–04 | *Wm. L. Dewoody* | Robert C. Reilly |
| 1904–05 | *Charles R. Sherman* | Robert C. Reilly |
| 1905–06 | *Henry P. Hynson* | H. D. Kniseley |
| 1906–07 | H. D. Kniseley | *Charles H. Avery* |
| 1907–08 | *Jacob Diner* | George O. Young |
| 1908–09 | *Harry B. Mason* | *Erich H. Ladish* |
| 1909–10 | W. M. Bowman | *G. H. P. Lichthardt* |
| 1910–11 | *Franklin M. Apple* | *Benj. E. Pritchard* |
| 1911–12 | Ernest Berger | *D. W. Ramsaur* |
| 1912–13 | Autumn V. Pease | William R. White |
| 1913–14 | C. G. Lindvall and *H. B. Mason* | Grant W. Stevens |
| 1914–15 | E. H. Thiesing | David Stolz |
| 1915–16 | R. S. Lehmann | J. C. McGee |
| 1916–17 | *P. Henry Utech* | Robt. P. Fischelis |
| 1917–18 | Robt. P. Fischelis | F. W. Nitardy |
| 1918–19 | E. Fullerton Cook | *H. S. Noel* |
| 1919–20 | *H. S. Noel* | C. O. Lee |
| 1920–21 | Adam Wirth | Charles W. Holton |
| 1921–22 | Charles W. Holton | B. H. Eichold |
| 1922–23 | Walter M. Chase | *Henry B. Smith* |
| 1923–24 | *Henry B. Smith* | *W. Bruce Philip* |
| 1924–25 | *W. Bruce Philip* | George Judisch |
| 1925–26 | *Ambrose Hunsberger* | B. M. Keene |
| 1926–27 | B. M. Keene | C. L. O'Connell |
| 1927–28 | C. L. O'Connell | *R. B. Rothrock* |
| 1928–29 | *R. B. Rothrock* | J. G. Noh |
| 1929–30 | *Denny Brann* | Rowland Jones |
| 1930–31 | Jos. G. Noh | Leon Monell |
| 1931–32 | Rowland Jones | John A. J. Funk |
| 1932–33 | L. M. Monell | Henry Brown |
| 1933–34 | John A. J. Funk | Robert W. Rodman |
| 1934–35 | Henry Brown | R. T. Lakey |
| 1935–36 | R. W. Rodman | H. F. Hein |
| 1936–37 | R. T. Lakey | J. H. Goodness |
| | **Pharmaceutical Economics:** | |
| 1937–38 | Henry F. Hein | Joseph H. Goodness |
| 1938–39 | Paul C. Olsen | Joseph H. Goodness |
| 1939–40 | Joseph H. Goodness | C. M. Brown |
| 1940–41 | C. M. Brown | Ira Rothrock |

## SECTION ON PHARMACEUTICAL ECONOMICS (*continued*)

| | | | | | |
|---|---|---|---|---|---|
| 1941–42 | B. Olive Cole | H. W. Heine | 1946–47 | Stephen Wilson | G. F. Archambault |
| 1942–44 | B. R. Mull | Stephen Wilson | 1947–48 | Stephen Wilson | E. J. Ireland |
| 1944–46 | B. R. Mull | Stephen Wilson | 1948–49 | W. L. Califf | E. J. Ireland |
| | | | 1949–50 | Edward Ireland | John MacCartney |

## SECTION ON HISTORICAL PHARMACY

| Year | Chairmen | Secretaries | Year | Chairmen | Secretaries |
|---|---|---|---|---|---|
| 1904–05 | *Albert E. Ebert* | *Caswell A. Mayo* | 1926–27 | W. F. Sudro | *E. J. Kennedy* |
| 1905–06 | *John F. Hancock* | *C. S. N. Hallberg* | 1927–28 | *W. P. Porterfield* | *Ambrose Mueller* |
| 1906–07 | *Ewen McIntyre* | *Eugene G. Eberle* | 1928–29 | L. F. Kebler | Geo. D. Beal |
| 1907–08 | *E. V. Howell* | *Eugene G. Eberle* | 1929–30 | Geo. D. Beal | J. T. Lloyd |
| 1908–09 | *John B. Bona* | *Eugene G. Eberle* | 1930–31 | J. T. Lloyd | L. E. Warren |
| 1909–10 | *Eugene G. Eberle* | *John A. Dunn* | 1931–32 | J. T. Lloyd | Louis Gershenfeld |
| 1910–11 | *Jos. L. Lemberger* | *O. Raubenheimer* | 1932–33 | Louis Gershenfeld | C. O. Lee |
| 1911–12 | *O. Raubenheimer* | *Caswell A. Mayo* | 1933–34 | Louis Gershenfeld | C. O. Lee |
| 1912–13 | *John G. Godding* | *F. T. Gordon* | 1934–35 | C. O. Lee | H. W. Youngken |
| 1913–14 | *W. C. Alpers* | *F. T. Gordon* | 1935–36 | H. W. Youngken | L. E. Harris |
| 1914–15 | *F. T. Gordon* | *A. H. Clark* | 1936–37 | Loyd E. Harris | Ed J. Ireland |
| 1915–16 | *Charles Holzhauer* | *G. G. Marshall* | 1937–38 | E. J. Ireland | Will T. Bradley |
| 1916–17 | *W. L. DuBois* | *L. E. Sayre* | 1938–39 | Willis T. Bradley | J. Hampton Hoch |
| 1917–18 | *L. E. Sayre* | *Hugo Kantrowitz* | 1939–40 | J. Hampton Hoch | L. F. Jones |
| 1918–19 | *Hugo Kantrowitz* | *W. O. Richtmann* | 1940–41 | Ivor Griffith | F. D. Stoll |
| 1919–20 | *W. O. Richtmann* | Curt P. Wimmer | 1941–42 | L. F. Jones | R. Bienfang |
| 1920–21 | Curt P. Wimmer | *A. W. Linton* | 1942–43 | F. D. Stoll | K. L. Kaufman |
| 1921–22 | Curt P. Wimmer | *E. G. Eberle* | 1943–44 | F. D. Stoll | K. L. Kaufman |
| 1922–23 | Clyde L. Eddy | *Robt. S. Lehman* | 1944–46 | F. D. Stoll | K. L. Kaufman |
| 1923–24 | Clyde L. Eddy | *Robt. S. Lehman* | 1946–47 | K. L. Kaufman | K. Redman |
| 1924–25 | *Robt. S. Lehman* | L. K. Darbaker | 1947–48 | C. M. Brown | R. T. Lakey |
| 1925–26 | L. K. Darbaker | W. F. Sudro | 1948–49 | Kenneth Redman | H. George Wolfe |
| | | | 1949–50 | Roland T. Lakey | Glenn Sonnedecker |

# AMERICAN PHARMACEUTICAL ASSOCIATION

## OFFICIAL ROSTER AND PHARMACEUTICAL DIRECTORY

## 1949–1950

### OFFICERS OF THE ASSOCIATION

*President*, Glenn L. Jenkins, Lafayette, Indiana
*Honorary President*, Robert C. Wilson, Athens, Georgia
*First Vice-President*, Harold C. Kinner, Washington, D. C.
*Second Vice-President*, Leib L. Riggs, Portland, Oregon
*Secretary*, Robert P. Fischelis, Washington, D. C.
*Treasurer*, Hugo H. Schaefer, Brooklyn, N. Y.

---

### OFFICERS-ELECT AND COUNCIL MEMBERS-ELECT 1950–1951

*Term of office begins May 5, 1950*

*President-Elect*, Henry H. Gregg, Minneapolis, Minnesota
*First Vice-President-Elect*, Roy A. Bowers, Albuquerque, New Mexico
*Second Vice-President-Elect*, Louis J. Fischl, Oakland, California
*Council Members-Elect*, (1953) B. V. Christensen, Columbus, Ohio; H. A. B. Dunning, Baltimore, Maryland; Ernest Little, Newark, New Jersey

---

*Editors of the Journal: Scientific Edition*, Justin L. Powers, Washington, D. C.; *Practical Pharmacy Edition*, Robert P. Fischelis and Harold V. Darnell, Washington, D. C.

---

### THE COUNCIL

**Elected Members**—(1950) B. V. Christensen, Columbus, Ohio; H. A. B. Dunning, Baltimore, Md.; George A. Moulton, Peterborough, N. H.; (1951) Martin E. Adamo, Boston, Mass.; Don E. Francke, Ann Arbor, Mich.; Robert L. Swain, New York, N. Y.; (1952) George D. Beal, Pittsburgh, Pa.; John B. Heinz, Salt Lake City, Utah; Roy L. Sanford, Enid, Okla.

**Ex-Officio Members**—Glenn L. Jenkins, Ernest Little, Harold C. Kinner, Leib L. Riggs, R. Q. Richards, Robert P. Fischelis, Hugo H. Schaefer.

#### Officers of the Council

*Chairman*, George D. Beal; *Vice-Chairman*, George A. Moulton; *Secretary*, Robert P. Fischelis.

#### Standing Committees of the Council

**Committee on Finance**—*Chairman*, R. L. Swain; H. A. B. Dunning; H. H. Schaefer.

**Committee on Property and Funds**—*Chairman*, G. L. Jenkins; G. D. Beal; R. P. Fischelis; H. H. Schaefer; R. L. Swain.

**Committee on Publications**—*Chairman*, G. D. Beal; B. V. Christensen; R. P. Fischelis; Don E. Francke; H. H. Schaefer.

#### Special Committees of the Council

**Committee on A. Ph. A. Laboratory**—*Chairman*, G. D. Beal (1953); *Secretary*, J. L. Powers (1950); G. L. Jenkins (1951); C. P. Frailey (1952); F. O. Taylor (1954). Ex-officio, E. F. Cook; R. P. Fischelis; A. M. Mattocks.

**Committee on Tenure of Office and Retirement Provisions**—*Chairman*, H. H. Schaefer; H. A. B. Dunning; R. L. Swain.

**Committee on Office Personnel**—*Chairman*, R. L. Swain; H. A. B. Dunning; H. H. Schaefer.

**Committee on Standard Program**—*Chairman*, G. L. Jenkins; J. B. Burt; P. H. Costello; R. P. Fischelis; R. S. Kelley; R. Q. Richards; L. C. Zopf.

**Committee on Affiliated Organizations**—*Chairman*, H. H. Schaefer; M. E. Adamo; R. P. Fischelis; J. B. Heinz, H. C. Kinner.

**Committee on Nominations**—*Chairman*, H. H. Schaefer; G. L. Jenkins; R. L. Sanford.

**Committee on Convention Regulations**—*Chairman*, H. H. Schaefer; G. D. Beal; B. V. Christensen; R. P. Fischelis; G. L. Jenkins; R. Q. Richards.

**Committee on Revision of Code of Ethics**—*Chairman*, H. H. Schaefer; G. L. Jenkins; G. A. Moulton.

**Committee on Centennial Celebration**—*Chairman*, R. L. Swain; H. A. B. Dunning; R. P. Fischelis; G. L. Jenkins; H. H. Schaefer.

### THE HOUSE OF DELEGATES

**Officers of the House**—*Chairman*, R. Q. Richards, Fort Myers, Florida; *Vice Chairman*, Newell W. Stewart, Phoenix, Arizona; *Secretary*, R. P. Fischelis, Washington, D. C.

#### Committees, House of Delegates

**Place of Meeting**—*Chairman*, B. V. Christensen, Columbus, Ohio; Hans S. Hansen, Chicago, Ill.; Emil C. Horn, Milwaukee, Wis.; Martin E. Adamo, Boston, Mass.; Hugo H. Schaefer, Brooklyn, N. Y.; Louis C. Zopf, Iowa City, Iowa; P. H. Costello, Chicago, Ill.; R. P. Fischelis, Washington, D. C.

**State Food and Drug Legislation**—*Chairman*, James S. Hill, Niagara Falls, N. Y.; Frank W. Moudry, Minneapolis, Minn.; E. M. Josey, Frankfort, Ky. Thomas J. Vratny, Chicago, Ill.; M. N. Ford, Columbus, Ohio.

### THE SECTIONS

#### SCIENTIFIC SECTION

**Officers**—*Chairman*, Raymond P. Ahlquist, Augusta, Ga.; *First Vice-Chairman*, Earl P. Guth, Columbus, Ohio; *Second Vice-Chairman*, Lloyd M. Parks, Madison, Wis.; *Secretary-Treasurer*, Ray S. Kelley, Boston, Mass.; *Delegate to the House of Delegates*, Paul J. Janake, New Haven, Conn.; *Alternate Delegate*, R. C. Anderson, Indianapolis, Ind.

**Committee on Horticultural Nomenclature**—*Chairman*, Heber W. Youngken, Boston, Mass.; C. W. Ballard, New York, N. Y.; George Hocking, Albuquerque, N. Mex.

**Committee on Physiological Testing**—*Chairman*, L. W. Rowe, Detroit, Mich.; M. G. Allmark, Ottawa, Canada; C. W. Chapman, Baltimore, Md.; L. D. Edwards, Lafayette, Ind.; H. G. O. Holck, Lincoln, Nebr.; L. C. Miller, Rensselaer, N. Y.; H. L. Reed, Boston, Mass.; O. F. Swoap, Kalamazoo, Mich.; C. H. Waldon, Missoula, Mont.

**Committee on Kilmer Prize**—*Chairman*, L. D. Hiner, Salt Lake City, Utah; A. E. Schwarting, Lincoln, Nebr.; H. W. Youngken, Jr., Seattle, Wash.

**Committee on Ebert Prize**—*Chairman*, James M. Dillie, Seattle, Wash.; Robertson Pratt, San Francisco, Calif.; John A. Ellegood, Philadelphia, Pa.; Ralph F. Voight, Chicago, Ill.; Kenneth L. Waters, Athens, Ga.

**Committee on Constitution and By-laws**—*Chairman*, Rudolph H. Blythe, Llanerch, Pa.; C. W. Bauer, Boston, Mass.; C. O. Wilson, Austin, Texas.

SECTION ON PRACTICAL PHARMACY

**Officers**—*Chairman*, Arthur P. Wyss, Cleveland, Ohio; *First Vice-Chairman*, Raymond E. Schmitz, Niagara Falls, N. Y.; *Second Vice-Chairman*, Mary K. Keenan, Duluth, Minn.; *Secretary*, Elmer M. Plein, Seattle, Wash.; *Delegate to the House of Delegates*, John J. Zugich, New Haven, Conn.; *Alternate Delegate*, Samuel W. Goldstein, Baltimore, Md.

**Committee on Prescription Tolerances**—*Chairman*, James S. Hill, Niagara Falls, N. Y.; Samuel W. Goldstein, Baltimore, Md.; Frederick D. Lascoff, New York, N. Y.; Max N. Lemberger, Milwaukee, Wis.; Roland H. Noel, Larchmont, N. Y.; Ronald V. Robertson, Spokane, Wash.

**Committee on Professional Terminology**—*Chairman*, Glenn Sonnedecker, Madison, Wis.; Elmer M. Plein, Seattle, Wash.; Edward C. Elliott, Washington, D. C.; Don E. Francke, Ann Arbor, Mich.; Robert C. Gasen, Syracuse, N. Y.; Nicholas W. Fenny, New Haven, Conn.

SECTION ON EDUCATION AND LEGISLATION

**Officers**—*Chairman*, Ralph W. Clark, Lawrence, Kans.; *Vice-Chairman*, R. V. Robertson, Spokane, Wash.; *Secretary*, David W. O'Day, Laramie, Wyo.; *Delegate to the House of Delegates*, Bernard A. Bialk, Tucson, Ariz.

SECTION ON PHARMACEUTICAL ECONOMICS

**Officers**—*Chairman*, Edward Ireland, New Orelans, La.; *Vice-Chairman*, Rudolph Puls, Cincinnati, Ohio; *Secretary*, John MacCartney, Detroit, Mich.; *Delegate to the House of Delegates*, W. L. Califf, Charleston, S. C.

SECTION ON HISTORICAL PHARMACY

**Officers**—*Chairman*, Roland T. Lakey, Detroit, Mich.; *Vice-Chairman*, H. George Wolfe, New York City; *Secretary*, Glenn Sonnedecker, Madison, Wis.; *Delegate to the House of Delegates*, Kenneth Redman, Clarksville, Ark.

## WOMEN'S AUXILIARY, A. PH. A.

*President*, Mrs. Charles H. Evans, Warrenton, Ga.
*Honorary President*, Mrs. H. C. Christensen, Chicago, Ill.
*First Vice-President*, Mrs. M. L. Jacobs, Chapel Hill, N. C.
*Second Vice-President*, Mrs. E. R. Serles, Chicago, Ill.
*Secretary*, Mrs. W. Arthur Purdum, Baltimore, Md.
*Treasurer*, Mrs. Roy L. Sanford, Enid, Okla.
*Parliamentarian*, Mrs. Andrew G. DuMez, Baltimore, Md.

### District Chairmen

*First District*, Mrs. H. C. Newton, Wellesley Hills, Mass.
*Second District*, Mrs. J. L. Hayman, Morgantown, W. Va.
*Third District*, Mrs. R. Q. Richards, Ft. Myers, Fla.
*Fourth District*, Mrs. E. R. Serles, Chicago, Ill.
*Fifth District*, Mrs. C. V. Netz, Minneapolis, Minn.
*Sixth District*, Mrs. Roy L. Sanford, Enid, Okla.
*Seventh District*, Mrs. R. D. Dame, Caspar, Wyo.
*Eighth District*, Mrs. F. J. Goodrich, Seattle, Wash.

## STANDING AND SPECIAL COMMITTEES OF THE ASSOCIATION

### Elected by the Council

**Committee on National Formulary**—*Chairman*, Justin L. Powers, Washington, D. C. (1950); W. Arthur Purdum, Baltimore, Md. (1959); R. A. Deno, Newark, N. J. (1950); H. B. Haag, Richmond, Va. (1951); George M. Hocking, Buffalo, N. Y. (1952); F. E. Bibbins, Indianapolis, Ind. (1953); H. H. Schaefer, Brooklyn, N. Y. (1954); A. R. Granito, Hackensack, N. J. (1955); J. B. Fullerton, Kalamazoo, Mich. (1956); Edward A. Brecht, Chapel Hill, N. C. (1957); C. O. Lee, Lafayette, Ind. (1958). Ex-officio, Melvin W. Green, Madison, Wis.

**Iodine Research Award Committee**—*Chairman*, Justin L. Powers, Washington, D. C.; Louis Gershenfeld, Philadelphia, Pa. (1950); Charles O. Wilson, Austin, Texas (1950); Harvey B. Haag, Richmond, Va. (1951); Heber W. Youngken, Boston, Mass. (1951); John C. Krantz, Jr., Baltimore, Md. (1952); Frank O. Taylor, New York, N. Y. (1952).

**Committee on Pharmaceutical Research**—*Chairman*, Glenn L. Jenkins, Lafayette, Ind. (1952); J. C. Krantz, Jr., Baltimore, Md. (1950); E. N. Gathercoal, Pentwater, Mich. (1950); L. W. Rowe, Detroit, Mich. (1951); H. W. Youngken, Boston, Mass. (1951); B. V. Christensen, Columbus, Ohio (1952); Ernest Little, Newark, N. J. (1953); Earl R. Serles, Chicago, Ill. (1953). *Associate Members*, E. F. Cook, Philadelphia, Pa.; J. L. Powers, Washington, D. C.; Raymond P. Ahlquist, Augusta, Ga.; H. H. Schaefer, Brooklyn, N. Y.; R. P. Fischelis, Washington, D. C.

## STANDING COMMITTEES

### Appointed by the President

**Committee on Local and Student Branches**—*Chairman*, Kenneth L. Waters, Athens, Ga.; *Co-chairman*, Edward P. Claus, Pittsburgh, Pa.; Earl R. Serles, Chicago, Ill.; H. G. DeKay, Lafayette, Ind.; Linwood F. Tice, Philadelphia, Pa.; David O'Day, Laramie, Wyo.; Martin S. Ulan, Newark, N. J.

**Board of Canvassers**—*Chairman*, George F. Archambault, Washington, D. C.; Charles W. Bliven, Washington, D. C.; L. M. Kantner, Baltimore, Md.

**Committee on Membership**—*General Chairman*, Robert P. Fischelis, Washington, D. C. District and State Chairmen to be appointed.

**Committee on Legislation**—*Chairman*, H. H. Schaefer, Brooklyn, N. Y.; P. H. Costello, Chicago, Ill.; R. C. Gasen, Syracuse, N. Y.; L. M. Kantner, Baltimore, Md.; R. L. Swain, New York, N. Y.

**Committee on U. S. Pharmacopoeia**—*Chairman*, E. A. Brecht, Chapel Hill, N. C. (1958); F. O. Taylor, Detroit, Mich. (1950); L. D. Hiner, Salt Lake City, Utah (1951); J. L. Hayman, Morgantown, W. Va. (1952); Arthur E. James, West Chester, Pa. (1953); John H. Greenaway, Portsmouth, N. H. (1954); J. A. Reese, Lawrence, Kans. (1955); Heber W. Youngken, Jr., Seattle, Wash. (1956); Max N. Lemberger, Milwaukee, Wis. (1957); Leroy D. Edwards, Lafayette, Ind. (1959).

**Committee on Public Relations**—*Chairman*, Tom D. Rowe, Newark, N. J.; *Secretary*, Harold V. Darnell, Washington, D. C.; Walter M. Chase, Detroit, Mich.; R. P. Fischelis, Washington, D. C.; Jean Henderson, Jacksonville, Fla.; Bert R. Mull, Indianapolis, Ind.

**Committee on Status of Pharmacists in Government Service**—*Chairman*, Arthur H. Einbeck, West New York, N. J.; Norman N. Baker, New York, N. Y.; R. Blackwell Smith, Jr., Richmond, Va. Also three representatives each from N. A. B. P., A. A. C. P., and N. A. R. D.

**Committee on Policy and Planning**—*Chairman*, Robert P. Fischelis, Washington, D. C. (1952); John F. McCloskey, New Orleans, La. (1950); George A. Moulton, Peterborough, N. H. (1950); Arthur H. Uhl, Madison, Wis. (1950); Roy B. Cook, Charleston, W. Va. (1951); R. Lincoln McNeil, Philadelphia, Pa. (1951); C. H. Rogers, Minneapolis, Minn. (1951); Charles H. Evans, Warrenton, Ga. (1952); Robert L. Swain, New York, N. Y. (1952).

## SPECIAL COMMITTEES

### Appointed by the President

**Committee on William Procter, Jr., Monument Fund**—*Chairman*, J. E. Hancock,* Baltimore, Md.; A. R. Granito, Hackensack, N. J.; Ernest R. Jones, Detroit, Mich.; John F. McCloskey, New Orleans, La.; George Urdang, Madison, Wis.

**Committee on Endowment Fund**—*Chairman*, H. A. B. Dunning, Baltimore, Md.; C. P. Frailey, Washington, D. C.; H. C. Fritsch, Detroit, Mich.; Eli Lilly, Indianapolis, Ind.; E. L. Newcomb, New York, N. Y.

**American Institute of Pharmacy Maintenance Committee**—*Chairman*, H. A. B. Dunning, Baltimore, Md.; George D. Beal, Pittsburgh, Pa.; Robert P. Fischelis, Washington, D. C.; George P. Hager, Baltimore, Md.; Frank F. Law, Philadelphia, Pa.

* Deceased

**Committee on Social and Economic Relations**—*Chairman*, Stephen Wilson, Pittsburgh, Pa.; George A. Bender, Detroit, Mich.; Joseph B. Burt, Lincoln, Nebr.; Paul Olsen, Philadelphia, Pa.; R. Q. Richards, Fort Myers, Fla.

**Committee on Professional Relations**—*Chairman*, Earl R. Serles, Chicago, Ill.; Charles H. Evans, Warrenton, Ga.; P. A. Foote, Gainesville, Fla.; Henry W. Heine, Indianapolis, Ind.; Tom D. Rowe, Newark, N. J.; Austin Smith, Chicago, Ill.; Donald A. Wallace, Chicago, Ill.; Charles E. Wilson, Corinth, Miss.

**Committee on Constitution and By-Laws**—*Chairman*, B. V. Christensen, Columbus, Ohio; George D. Beal, Pittsburgh, Pa.; G. L. Webster, Chicago, Ill.

**Committee of Six**—*Chairman*, B. V. Christensen, Columbus, Ohio; George D. Beal, Pittsburgh, Pa.; H. V. Darnell, Washington, D. C.; Hugh C. Muldoon, Pittsburgh, Pa.; George A. Moulton, Peterborough, N. H.; George L. Webster, Chicago, Ill.

**Committee on National Defense and Security**—*Chairman*, Robert P. Fischelis, Washington, D. C.; Joseph B. Burt, Lincoln, Nebr.; P. H. Costello, Chicago, Ill.; Noel E. Foss, Baltimore, Md.; George H. Frates, Washington, D. C.

**Joint Committee, American Pharmaceutical Association and American Social Hygiene Association**—*Chairman*, Robert P. Fischelis, Washington, D. C.; John J. Debus, Trenton, N. J.; Linwood F. Tice, Philadelphia, Pa. In addition, the Committee includes three representatives of the American Social Hygiene Association.

**Joint Conference Committee on Federal Food, Drug, and Cosmetic Law Problems**—*Chairman*, H. H. Schaefer, Brooklyn, N. Y.; Don E. Francke, Ann Arbor, Mich.; M. D. Pritchard, Buffalo, N. Y. Ex-officio, R. P. Fischelis, Washington, D. C. In addition, the Committee includes three representatives of the National Association of Retail Druggists and one representative of the National Association of Chain Drug Stores.

## DELEGATES TO NATIONAL AND INTERNATIONAL COMMISSIONS, CONFERENCES, COUNCILS, ETC.

**American Association for the Advancement of Science**—*Councilors*, Glenn L. Jenkins, Lafayette, Ind.; Robert P. Fischelis, Washington, D. C.

**American Council on Education**—*Delegates*, George D. Beal, Pittsburgh, Pa.; Robert P. Fischelis, Washington, D. C.; Glenn L. Jenkins, Lafayette, Ind.

**American Council on Pharmaceutical Education**—*Representatives*, George D. Beal, Pittsburgh, Pa. (1950); L. D. Bracken, Seattle, Wash. (1954); Robert P. Fischelis, Washington, D. C. (1952). These members serve with an equal number from the A. A. C. P. and the N. A. B. P.

**American Foundation for Pharmaceutical Education**—*Proxy*, Robert P. Fischelis, Washington, D. C. *Member of the Board of Directors*, H. A. B. Dunning, Baltimore, Md. (1950).

**American Documentation Institute**—*Delegate*, Robert P. Fischelis, Washington, D. C.

**American Society for Testing Materials**—Committee on Glass and Glass Products—*Delegate*, J. L. Powers, Washington, D. C.

**Commission on Professional Man Power for Pharmacy**—*Delegate*, Robert P. Fischelis, Washington, D. C., *Temporary Chairman*.

**Commission on Standardization of Biological Stains**—*Delegate*, C. W. Ballard, New York, N. Y.

**International Pharmaceutical Federation**—*Delegates*, Glenn L. Jenkins, Lafayette, Ind.; Robert P. Fischelis, Washington, D. C.

**Inter-Society Color Council**—*Delegates*, A. M. Mattocks, Washington, D. C.; Justin L. Powers, Washington, D. C.

**Joint Committee for the Coordination of Medical Activities**—*Delegates*, P. H. Costello, Chicago, Ill. (1951); Robert P. Fischelis, Washington, D. C. (1952); Earl R. Serles, Chicago, Ill. (1950).

**National Drug Trade Conference**—*Delegates*, George D. Beal, Pittsburgh, Pa.; Glenn L. Jenkins, Lafayette, Ind.; Robert P. Fischelis, Washington, D. C. (*Member of the Executive Committee.*)

**National Health Council**—*Delegates*, F. D. Lascoff, New York, N. Y.; H. H. Schaefer, Brooklyn, N. Y.; R. P. Fischelis, Washington, D. C. (*Member of the Board of Directors.*)

**U. S. P. Convention**—*Delegates*, Robert P. Fischelis, Washington, D. C., *Chairman;* Justin L. Powers, Washington, D. C.; Albert M. Mattocks, Washington, D. C.

# A. PH. A. LOCAL AND STUDENT BRANCHES

## LOCAL BRANCHES

(*Listed alphabetically by branch title*)

| NAME | PRESIDENT | SECRETARY AND ADDRESS |
|---|---|---|
| Albuquerque | S. J. Hayman | Roy A. Bowers, University of New Mexico, College of Pharmacy, Albuquerque, N. M. |
| Baltimore | George P. Hager, Jr. | F. S. Balassone, 140 N. Denison St., Baltimore 29, Md. |
| California | Alvah G. Hall | Harold S. Runsvold, 481 University Circle, Claremont, Calif. |
| Canal Zone | William F. Grady | Everett R. Kimmel, Box 264, Gamboa, C. Z. |
| Chicago | Paul Soderdahl | Louis Gdalman, St. Luke's Hospital, 1439 S. Michigan Ave., Chicago 5, Ill. |
| Cincinnati | Rudolph Puls | Simon Mendelsohn, Cincinnati College of Pharmacy, 423 W. 8th St., Cincinnati 3, Ohio |
| City of Washington | Charles Bliven | Eddie Wolfe, Mt. Alto Veterans Hospital, 2650 Wisconsin Ave., N. W., Washington 7, D. C. |
| Michigan | Walter L. Griffith | Gordon F. Goyette, Jr., 15047 Mark Twain, Detroit 27, Mich. |
| New York | Charles H. Soren | Frank J. Pokorny, 115 W. 68th St., New York 23, N. Y. |
| Northern California | Fred Switzer | James Staven, 1221 Masonic Ave., San Francisco, Calif. |
| Northern New Jersey | Harold Stratton | Martin S. Ulan, 66 Hospital Place, Hackensack, N. J. |
| Northern Ohio | Joseph Matousek | Robert Kreutzberg (Acting), c/o Strong Cobb Inc., Lisbon Rd. & Evins Ave., Cleveland, Ohio |
| North Pacific | Fred Meek | Fred A. Geue, 240 N. E. 60th, Apt. 26, Portland 15, Ore. |
| Northwestern | Henry H. Gregg | Willard J. Hadley, University of Minnesota, College of Pharmacy, Minneapolis 14, Minn. |
| Northwestern Ohio | Dwight M. Shields | Walding G. Rupp, 315 Superior St., Toledo 3, Ohio |
| Philadelphia | Robert L. McNeil, Jr. | Joseph B. Sprowls, Temple University, School of Pharmacy, Philadephia, Pa. |
| Pittsburgh | Joseph R. DePhilip | Stephen Wilson, 1431 Blvd. of the Allies, Pittsburgh 19, Pa. |
| Puerto Rico | Adolpho F. Legrand | Esteban Nunez-Melendez, P. O. Box 844, Rio Piedras, P. R. |
| Southeast Wisconsin | Emil C. Horn | Merle P. Betts, 5402 W. Vliet St., Milwaukee, Wis. |
| St. Louis | Walter G. Fredell | Louis O. Kloeckner, 2301 Pestalozzi St., St. Louis 18, Mo. |
| Western New York | Simon Kahn | S. Walley Bower, 435 Tacoma Ave., Buffalo 16, N. Y. |

## A. PH. A. LOCAL AND STUDENT BRANCHES *(continued)*

### STUDENT BRANCHES

*(Colleges listed alphabetically by State)*

| NAME | PRESIDENT | SECRETARY AND ADDRESS |
|---|---|---|
| Alabama Polytechnic Institute | Joe Wallace | Mary Kirkland, School of Pharmacy, Auburn, Ala. |
| Howard College | Jane Bratten | Ann White, Div. of Pharmacy, Birmingham, Ala. |
| University of Arizona | Jack Suite | Lorraine Proctor, School of Pharmacy, Tucson, Ariz. |
| University of California | David Kraus | Lorraine Masters, College of Pharmacy, The Medical Center, San Francisco 22, Calif. |
| University of Southern California | Karl Newman | Kazuko Matsumoto (Miss), College of Pharmacy, University Park, Los Angeles 7, Calif. |
| University of Colorado | Lorene Scott | Eleanor Tait, College of Pharmacy, Boulder, Colorado |
| University of Connecticut | Victor Lautier | G. Philip Lehrman, College of Pharmacy, New Haven, Conn. |
| George Washington University | Leon I. Drapkin | Philip J. Simon, School of Pharmacy, Washington 6, D. C. |
| Howard University | Floyd L. White | Charles C. Smith, Jr., College of Pharmacy, Washington, D. C. |
| University of Florida, Mortar and Pestle | Lucien G. Fischesser | Charles Anderson, College of Pharmacy, Gainesville, Fla. |
| Southern College of Pharmacy | James V. Riley | Robert H. Candler, Atlanta 3, Georgia |
| University of Georgia | Robert Petruzzo | Patsy Gleeson, School of Pharmacy, Athens, Ga. |
| Idaho State College | Harry La Munyon | James Walker, College of Pharmacy, Pocatello, Idaho |
| University of Illinois | John Neumann | Elizabeth Barwig, College of Pharmacy, 808 S. Wood St., Chicago 12, Ill. |
| Butler University | James Kiser | Carl Freije, 802 Market St., Indianapolis, Ind. |
| Purdue University | John J. Dougherty | Margie Andersen, School of Pharmacy, West Lafayette, Ind. |
| Drake University | Duwane Dandurant | Wendell Southard, College of Pharmacy, Des Moines 11, Iowa |
| State University of Iowa | Laurence E. Feagin | Jean Roberts, College of Pharmacy, Iowa City, Iowa |
| University of Kansas | Wesley Jarecke | Marilyn Lindberg, School of Pharmacy, Lawrence, Kansas |
| University of Kentucky | James M. Hart | Gloria H. Hartman, College of Pharmacy, 104 W. Chestnut St., Louisville, Ky. |
| Loyola University | James E. Riley | John C. Tropea, College of Pharmacy, 6363 St. Charles Ave., New Orleans, La. |
| Massachusetts College of Pharmacy | Randall Tinker | Robert Donovan, Boston 15, Mass. |
| Ferris Institute | Kenneth Weber | Marjorie Anderson, College of Pharmacy, Big Rapids, Mich. |
| University of Michigan, Albert B. Prescott Student Branch | Kenneth Riebe | Jane Zettel, College of Pharmacy, Ann Arbor, Mich. |
| Wayne University | William Jevons | Bernadine Zak, College of Pharmacy, Detroit 26, Mich. |
| University of Minnesota | Rodney C. Dziuk | John D. Goldner, College of Pharmacy, Minneapolis 14, Minn. |
| University of Mississippi | Edward N. Brock | Sara Mayfield, School of Pharmacy, University, Miss. |
| St. Louis College of Pharmacy and Allied Sciences | James R. Matthews | Herbert F. Schwalm, Euclid and Parkview Place, St. Louis 10, Mo. |
| University of Kansas City | William R. Wilson | Martha Johnson, School of Pharmacy, Kansas City, Mo. |
| Montana State University | Lloyd Bryant | Katherine Sigurnik, School of Pharmacy, Missoula, Mont. |
| University of Nebraska | George Coupe | Joan Duffy, College of Pharmacy, Lincoln 8, Nebr. |
| Rutgers University | Roy Doctofsky | Alice V. Robol, College of Pharmacy, 1 Lincoln Ave., Newark 4, N. J. |
| University of New Mexico | R. J. Gutierrez | V. E. Bennett, College of Pharmacy, Albuquerque, N. Mex. |
| Columbia University | Saul G. Mandel | Louise Haupt, College of Pharmacy, 113–119 W. 68th St. New York 23, N. Y. |
| Fordham University | Neil O. Connelly | George C. Reuther, New York 58, N. Y. |
| Long Island University | Joseph Hyman | John Stigi, Brooklyn College of Pharmacy, 598–608 Lafayette Ave., Brooklyn, N. Y. |
| St. John's University | Emil Grillo | Everett H. Bowers, College of Pharmacy, Brooklyn 2, N. Y. |
| Union University | Elmer H. Wright | Frances H. Safran, Albany College of Pharmacy, Albany, N. Y. |
| University of Buffalo | George C. Barone | Betty S. Bryan, School of Pharmacy, Buffalo 14, N. Y. |
| Cincinnati College of Pharmacy | Karl Smith | Martha Donovan, 423 W. 8th St., Cincinnati 3, Ohio |
| Ohio Northern University | Joseph Smucker | Beverly Davis, College of Pharmacy, Ada, Ohio |
| Ohio State University | Paul Stivison | Elaine Black, College of Pharmacy, Columbus 10, Ohio |
| University of Toledo | Sidney Adams | Dorothy Vogelsang, College of Pharmacy, Toledo 6, Ohio |
| Southwestern State College | Frank Mock | Jacqueline Thomas, School of Pharmacy, Weatherford, Okla. |
| Oregon State College | Kenneth Burson | Mary Jane Schermerhorn, School of Pharmacy, Corvallis, Ore. |
| Duquesne University | James Brady | Gloria Sergi, School of Pharmacy, 804 Bluff St., Pittsburgh 19, Pa. |
| Philadelphia College of Pharmacy and Science | Vincent Vendetti | Gerald Wynn, 43rd and Kingsessing Ave., Philadelphia 4, Pa. |
| Temple University | John Hinkle | Henrietta L. Zielinski, School of Pharmacy, 3223 N. Broad St., Philadelphia 40, Pa. |
| University of Pittsburgh | William Blockstein | Albert Kossler, School of Pharmacy, 1431 Blvd. of the Allies, Pittsburgh 19, Pa. |
| Medical College of the State of South Carolina | T. L. Rogers | Dan Thomas, School of Pharmacy, Charleston 16, S. C. |
| Univeristy of South Carolina | Charles C. Plaxco | Paul H. Stoddard, School of Pharmacy, Columbia, S. C. |
| University of Tennessee | Frank B. Hundley | Billy Joe Brake, School of Pharmacy, Memphis 3, Tenn. |
| University of Texas | Stanley Chapman | Patricia Williams, College of Pharmacy, Austin 12, Texas |
| University of Utah | Joseph D. Halgren | Anita Mae Allen, College of Pharmacy, Salt Lake City 1, Utah |
| Medical College of Virginia | Roy A. Moon | Randolph L. Arthur, School of Pharmacy, Richmond 19, Va. |
| State College of Washington | Ronald Doane | Dr. Haakon Bang, School of Pharmacy, Pullman, Wash. |
| University of Washington | David Richardson | Alice Louie, College of Pharmacy, Seattle 5, Wash. |
| West Virginia University | Herman Slaughter | Lucille A. Papa, College of Pharmacy, Morgantown, West Va. |
| University of Wisconsin | Ray Fiedler | Shirley Audenby, School of Pharmacy, Madison 6, Wis. |
| University of Wyoming | Walter Roy Beistle | Phyllis J. Chase, School of Pharmacy, Laramie, Wyo. |
| University of Puerto Rico | Luis Carrillo | Francisco E. Laborde, College of Pharmacy, Rio Piedras, P. R. |

# NATIONAL PHARMACEUTICAL ASSOCIATIONS

| NAME | SECRETARY |
|---|---|
| American Association of Colleges of Pharmacy | Louis C. Zopf, State University of Iowa, College of Pharmacy, Iowa City, Iowa |
| American College of Apothecaries | Charles V. Selby, 411 W. Main St., Clarksburg, W. Va. |
| American Drug Manufacturers' Association | Carson P. Frailey, Albee Bldg., Washington 5, D. C. |
| American Institute of the History of Pharmacy | Jennings Murphy, 625 N. Milwaukee St., Milwaukee 2, Wis. |
| American Pharmaceutical Association | Robert P. Fischelis, 2215 Constitution Ave. N. W., Washington 7, D. C. |
| American Pharmaceutical Manufacturers' Association | J. O'Neill Closs, The Tilden Co., New Lebanon, N. Y. |
| American Society of Hospital Pharmacists | Gloria F. Niemeyer, 2215 Constitution Ave. N. W., Washington 7, D. C. |
| Canadian Conference of Pharmaceutical Faculties | F. N. Hughes, Ontario College of Pharmacy, 46 Gerrard St., E., Toronto 2, Ont., Canada |
| Canadian Pharmaceutical Association | John W. Preston, 221 Victoria St., Toronto, Canada |
| Federal Wholesale Druggists' Association | R. C. Schlotterer, 220 Fifth Ave., New York 1, N. Y. |
| Friends of Historical Pharmacy | Harold V. Darnell, 2215 Constitution Ave. N. W., Washington 7, D. C. |
| National Association of Boards of Pharmacy | P. H. Costello, 77 W. Washington St., Chicago 2, Ill. |
| National Association of Chain Drug Stores | Carl Willingham, Vanderbilt Hotel, 4 Park Ave., New York 16, N. Y. |
| National Association of Retail Druggists | J. W. Dargavel, 205 W. Wacker Drive, Chicago 6, Ill. |
| National Pharmaceutical Association | Chauncey I. Cooper, Howard University, College of Pharmacy, Washington, D. C. |
| National Wholesale Druggists' Association | E. Allen Newcomb, 330 W. 42nd St., New York 18, N. Y. |
| Proprietary Association of America | A. K. Barta, 810 18th St., N. W., Washington 6, D. C. |

## CONFERENCES AND OTHER ORGANIZATIONS

| NAME | SECRETARY |
|---|---|
| American Council on Pharmaceutical Education | P. H. Costello, 77 W. Washington St., Chicago 2, Ill. |
| American Foundation for Pharmaceutical Education | E. L. Newcomb, 330 W. 42nd St., New York 18, N. Y. |
| Metropolitan Cities Drug Association Secretaries | John M. Myers, 32 W. Randolph St., Chicago 1, Ill. |
| National Conference of State Pharmaceutical Association Secretaries | E. M. Josey, 213 St. Clair St., Frankfort, Ky. |
| National Drug Trade Conference | R. C. Schlotterer, 220 Fifth Ave., New York 1, N. Y. |
| The Plant Science Seminar | Edward P. Claus, University of Pittsburgh, School of Pharmacy, Pittsburgh 19, Pa. |

# NATIONAL RELATED PROFESSIONAL ORGANIZATIONS

| NAME | SECRETARY OR DIRECTOR |
|---|---|
| American Association for the Advancement of Science | F. R. Moulton, 1515 Massachusetts Ave., N. W., Washington 5, D. C. |
| American Chemical Society | Alden H. Emery, 1155 Sixteenth St., N. W., Washington 6, D. C. |
| American Dental Association | Harold Hillenbrand, 222 E. Superior St., Chicago, Ill. |
| American Hospital Association | George Bugbee, Ex. Dir., 18 E. Division St., Chicago, Ill. |
| American Medical Association | George F. Lull, 535 N. Dearborn St., Chicago 10, Ill. |
| American Nurses' Association | Ella Best R.N., Ex. Sec., 1790 Broadway, New York 19, N. Y. |
| American Public Health Association | R. M. Atwater, 1790 Broadway, New York 19, N. Y. |
| American Social Hygiene Association | Walter Clarke, Ex. Dir., 1790 Broadway, New York 19, N. Y. |
| American Veterinary Medical Association | L. A. Merillat, 600 S. Michigan Ave., Chicago 5, Ill. |
| National Health Council | Thomas D. Dublin, Ex. Dir., 1790 Broadway; New York 19, N. Y. |
| National Society for Medical Research | A. C. Ivy, Sec.-Treas., 25 E. Washington St., Chicago 2, Ill. |

# STATE PHARMACEUTICAL ASSOCIATIONS

| STATE | SECRETARY AND ADDRESS |
|---|---|
| Alabama | Thelma M. Coburn, Rm. 304, Thomas Jefferson Hotel, Birmingham 3 |
| Arizona | N. W. Stewart, 502 N. Central Ave., Phoenix |
| Arkansas | Irl Brite, 607 Wallace Bldg., Little Rock |
| California | Oscar V. McCracken, 430 H. W. Hellman Bldg., Los Angeles 13 |
| Colorado | Chas. J. Clayton, 207 Kittredge Bldg., Denver |
| Connecticut | Alice-Esther Garvin, 20 Lake Place, New Haven |
| Delaware | J. Wallace Watson, Medical Arts Bldg., Wilmington 9 |
| District of Columbia | Harold C. Kinner, 301 Kennedy St., N. W., Washington<br>Horace Walker, Exec. Secy., 913 Union Trust Bldg. Washington. |
| Florida | R. Q. Richards, P. O. Box 631, Fort Meyers |
| Georgia | Russell D. Rainey, 306 Bona Allen Bldg., Atlanta |
| Idaho | James J. Lynch, 416 McCarty Bldg., Boise |
| Illinois | Thomas J. Vratny, 77 W. Washington St., Chicago 2 |
| Indiana | Henry W. Heine, 8 N. Senate Ave., Indianapolis 4 |
| Iowa | D. L. Bruner, 842 Des Moines Bldg., Des Moines 9 |
| Kansas | Clara Miller, 824 Kansas Ave., Topeka |
| Kentucky | E. M. Josey, 213 St. Clair St., Frankfort |
| Louisiana | Alfred Trahan, 315 St. Charles Ave., New Orleans 12 |

## STATE PHARMACEUTICAL ASSOCIATIONS *(continued)*

| STATE | SECRETARY AND ADDRESS |
|---|---|
| Maine | Francis A. Frawley, 104 Main St., Bangor |
| Maryland | Melville Strasburger, 10 W. Chase St., Baltimore 1 |
| Massachusetts | Samuel Silverman, 11 Beacon St., Boston |
| Michigan | John H. Butts, 1510 Olds Tower Bldg., Lansing 8 |
| Minnesota | Henry M. Moen, 2639 University Ave., St. Paul 4 |
| Mississippi | Roger I. Martin, Purvis |
| Missouri | O. R. Sutton, 601 Trust Bldg., Jefferson City |
| Montana | R. C. Dean, 4 Pittsburgh Bldg., Helena |
| Nebraska | Cora Mae Briggs, 410 Federal Securities Bldg., Lincoln 8 |
| Nevada | Jacques R. Bolam, P. O. Box 2030, Reno |
| New Hampshire | George A. Moulton, Peterborough |
| New Jersey | John J. Debus, 28 W. State St., Trenton 8 |
| New Mexico | Robert D. Sasser, 401 S. Aliso Ave., Albuquerque |
| | Max Hood, Exec. Mgr., 2120 E. Central, Albuquerque |
| New York | Nicholas S. Gesualde, 1261 Broadway New York 1 |
| North Carolina | William J. Smith, Drawer 151, Chapel Hill |
| North Dakota | W. F. Sudro, State College Station, Fargo |
| Ohio | Victor L. Keys, 30 E. Broad St., Columbus 15 |
| Oklahoma | Elbert R. Weaver, Box 510, Stillwater |
| Oregon | K. B. Farwell, Farwell Pharmacy, Stayton |
| | Jack Lynch, Mgr., 709 Old Journal Bldg., Portland |
| Pennsylvania | Chauncey E. Rickard, 508 N. Third St., Harrisburg |
| Puerto Rico | Carlota Badillo Vadi, Box 229 San Juan |
| Rhode Island | James J. Deery, 122 Miller Ave. Providence |
| South Carolina | J. M. Plaxco, Due West |
| South Dakota | Bliss C. Wilson, Box 38, Pierre |
| Tennessee | Tom C. Sharp, 406 Vendome Bldg., Nashville 3 |
| Texas | C. J. M. Roesch, Exec. Secy., 503 Littlefield Bldg., Austin |
| Utah | Earle F. Gardemann, Zion's Savings Bank Bldg., 12 E. South Temple St., Salt Lake City, Utah |
| Vermont | Mabel B. Clifford, Bethel |
| Virginia | J. C. Nottingham, 205 W. Grace St., Richmond |
| Washington | H. E. Henderson, 430 Henry Bldg., Seattle |
| West Virginia | William J. Dixon, P.O. Box 119, Oak Hill |
| Wisconsin | Jennings Murphy, 161 West Wisconsin Ave., Milwaukee |
| Wyoming | John B. Tripeny, 241 S. Center St., Casper |

## COLLEGES OF PHARMACY

*Institutions accredited by the American Council on Pharmaceutical Education, listed alphabetically by State*

| NAME | DEAN OR DIRECTOR |
|---|---|
| Alabama Polytechnic Institute, School of Pharmacy | Lynn S. Blake, Auburn, Ala. |
| Howard College, Division of Pharmacy | C. Lee Huyck, Dir., Birmingham 6, Ala. |
| University of Arizona, School of Pharmacy | Rufus A. Lyman, Tucson, Ariz. |
| College of the Ozarks, Dept. of Pharmacy | Kenneth Redman, Clarksville, Ark. |
| University of California, College of Pharmacy | T. C. Daniels, The Medical Center, San Francisco 22, Calif. |
| University of Southern California, College of Pharmacy | Alvah G. Hall, University Park, Los Angeles 7, Calif. |
| University of Colorado, College of Pharmacy | Charles F. Poe, Boulder, Colo. |
| University of Connecticut, College of Pharmacy | H. G. Hewitt, New Haven, Conn. |
| George Washington University, School of Pharmacy | Charles W. Bliven, Washington 6, D. C. |
| Howard University, College of Pharmacy | Chauncey I. Cooper, Washington 1, D. C. |
| University of Florida, College of Pharmacy | Perry A. Foote, Gainesville, Fla. |
| Southern College of Pharmacy | R. C. Hood, Atlanta 3, Ga. |
| University of Georgia, School of Pharmacy | Kenneth L. Waters, Athens, Ga. |
| Idaho State College, College of Pharmacy | E. E. Roscoe, Pocatello, Idaho |
| University of Illinois, College of Pharmacy | Earl R. Serles, 808 S. Wood St., Chicago 12, Ill. |
| Butler University, School of Pharmacy | Edward H. Niles, 802 E. Market St., Indianapolis 2, Ind. |
| Purdue University School of Pharmacy | Glenn L. Jenkins, Lafayette, Ind. |
| Drake University, College of Pharmacy | Byrl E. Benton, Des Moines 11, Iowa |
| State University of Iowa, College of Pharmacy | R. A. Kuever, Iowa City, Iowa |
| University of Kansas, School of Pharmacy | J. Allen Reese, Lawrence, Kansas |
| University of Kentucky, College of Pharmacy | Earl P. Slone, Louisville 2, Ky. |
| Loyola University, College of Pharmacy | John F. McCloskey, New Orleans, La. |
| Xavier University, College of Pharmacy | Lawrence F. Ferring, New Orleans, La. |
| University of Maryland, School of Pharmacy | Noel E. Foss, Baltimore 1, Md. |
| Massachusetts College of Pharmacy | H. C. Newton, Longwood Ave., Boston 15, Mass. |
| Detroit Institute of Technology, College of Pharmacy and Chemistry | Esten P. Stout, Detroit, Mich. |
| Ferris Institute, College of Pharmacy | Ralph M. Wilson, Big Rapids, Mich. |
| University of Michigan, College of Pharmacy | Charles H. Stocking, Ann Arbor, Mich. |
| Wayne University, College of Pharmacy | Roland T. Lakey, Detroit 26, Mich. |
| University of Minnesota, College of Pharmacy | Charles H. Rogers, Minneapolis 14, Minn. |
| University of Mississippi, School of Pharmacy | Elmer L. Hammond, University, Miss. |
| St. Louis College of Pharmacy and Allied Sciences | A. F. Schlichting, St. Louis 10, Mo. |
| University of Kansas City, School of Pharmacy | T. T. Dittrich, Kansas City 4, Mo. |
| Montana State University, School of Pharmacy | C. H. Waldon, Missoula, Mont. |
| Creighton University, College of Pharmacy | William A. Jarrett, Omaha 2, Nebr. |
| University of Nebraska, College of Pharmacy | Joseph B. Burt, Lincoln 8, Nebr. |
| Rutgers University, College of Pharmacy | Tom D. Rowe, 1 Lincoln Ave., Newark 4, N. J. |
| University of New Mexico, College of Pharmacy | Roy A. Bowers, Albuquerque, N. M. |
| Columbia University, College of Pharmacy | C. W. Ballard, 113-119 W. 68th St., New York 23, N. Y. |

## COLLEGES OF PHARMACY *(continued)*

| NAME | DEAN OR DIRECTOR |
|---|---|
| Fordham University, College of Pharmacy | James H. Kidder, New York 58, N. Y. |
| Long Island University, Brooklyn College of Pharmacy | Hugo H. Schaefer, 598-608 Lafayette Ave., Brooklyn 16, N. Y. |
| St. John's University, College of Pharmacy | John L. Dandreau, Brooklyn 2, N. Y. |
| Union University, Albany College of Pharmacy | Francis J. O'Brien, Albany, N. Y. |
| University of Buffalo, School of Pharmacy | A. B. Lemon, Buffalo, N. Y. |
| University of North Carolina, School of Pharmacy | M. L. Jacobs, Chapel Hill, N. C. |
| North Dakota Agricultural College, School of Pharmacy | William F. Sudro, Fargo, N. D. |
| Cincinnati College of Pharmacy | Joseph F. Kowalewski, Cincinnati 3, Ohio |
| Ohio Northern University, College of Pharmacy | Rudolph H. Raabe, Ada, Ohio |
| Ohio State University, College of Pharmacy | B. V. Christensen, Columbus 10, Ohio |
| University of Toledo, College of Pharmacy | Charles H. Larwood, Toledo 6, Ohio |
| University of Oklahoma, School of Pharmacy | Ralph W. Clark, Norman, Okla. |
| Oregon State College, School of Pharmacy | George E. Crossen, Corvallis, Ore. |
| Duquesne University, School of Pharmacy | Hugh C. Muldoon, Pittsburgh 19, Pa. |
| Philadelphia College of Pharmacy and Science | Ivor Griffith, 43rd St. and Kingsessing Ave., Philadelphia 4, Pa. |
| Temple University, School of Pharmacy | H. Evert Kendig, 3223 N. Broad St., Philadelphia 40, Pa. |
| University of Pittsburgh School of Pharmacy | Edward C. Reif, Pittsburgh 19, Pa. |
| Rhode Island College of Pharmacy and Allied Sciences | W. Henry Rivard, Providence, R. I. |
| Medical College of the State of South Carolina, School of Pharmacy | William A. Prout, Dir., Charleston 16, S. C. |
| University of South Carolina, School of Pharmacy | E. T. Motley, Columbia, S. C. |
| South Dakota State College, Division of Pharmacy | F. J. LeBlanc, Brookings, S. Dak. |
| University of Tennessee, School of Pharmacy | R. L. Crowe, Memphis 3, Tenn. |
| University of Texas, College of Pharmacy | Henry M. Burlage, Austin 12, Texas |
| University of Utah, College of Pharmacy | L. David Hiner, Salt Lake City, Utah |
| Medical College of Virginia, School of Pharmacy | R. Blackwell Smith, Jr., Richmond 19, Va. |
| State College of Washington, School of Pharmacy | P. H. Dirstine, Pullman, Wash. |
| University of Washington, College of Pharmacy | Forest J. Goodrich, Seattle 5, Wash. |
| West Virginia University, College of Pharmacy | J. Lester Hayman, Morgantown, West Va. |
| University of Wisconsin, School of Pharmacy | A. H. Uhl, Dir., Madison 6, Wis. |
| University of Wyoming, School of Pharmacy | David W. O'Day, Laramie, Wyo. |

## STATE BOARDS OF PHARMACY

| STATE | SECRETARY AND ADDRESS |
|---|---|
| Alabama | L. M. Alley, 8258 1st Ave., N., Birmingham 6 |
| Alaska | M. H. Sidener, Seward |
| Arizona | N. W. Stewart, 502 N. Central Ave., Phoenix |
| Arkansas | Joe Reagan, 608 Wallace Bldg., Little Rock |
| California | L. M. Walsh, 507 Polk St., San Francisco 2 |
| Colorado | Ralph E. Kemp, 619 Majestic Bldg., Denver 2 |
| Connecticut | Felix Blanc, 418 State Capitol, Hartford 6 |
| Delaware | Harry C. Zeisig, R. D. 2, Milford |
| District of Columbia | Harold C. Kinner, 301 Kennedy St., N. W., Washington 11 |
| Florida | George I. Martin, 210 S. Adams, Tallahassee |
| Georgia | R. C. Coleman, Jt. Secy., State Capitol, Atlanta 3 |
| Idaho | James J. Lynch, 414 McCarty Bldg., Boise |
| Illinois | Charles F. Kervin, Supt. of Registration, Dept. of Registration and Education, Springfield |
| Indiana | Paul C. Pinckley, State House, Indianapolis 4 |
| Iowa | John F. Rabe, State House, Des Moines 19 |
| Kansas | Blaine Miller, 159 N. Santa Fe, Salina |
| Kentucky | E. M. Josey, 213 St. Clair St., Frankfort |
| Louisiana | E. W. Vogt, Ferriday |
| Maine | Ralph W. Emerson, Island Falls |
| Maryland | L. M. Kantner, 2411 N. Charles St., Baltimore 18 |
| Massachusetts | Fred C. Hailer, State House, Boston 33 |
| Michigan | O. K. Grettenberger, Dir., Drugs and Drug Stores, 502 Olds Tower, Lansing 8 |
| Minnesota | Frank W. Moudry, 3965 Minnehaha Ave., Minneapolis 6 |
| Mississippi | Chester E. Jones, Jackson |
| Missouri | Charles W. Riley, 218 Wilhoit Bldg., Springfield |
| Montana | Emil Schoenholzer, 23 N. 27th St., Billings |
| Nebraska | Oscar Humble, Dir., Bur. Exam. Boards, State House, Lincoln 9 |
| Nevada | W. L. Merithew, Box 1087, Reno |
| New Hampshire | Clarence H. Hounsell, Laconia |
| New Jersey | Wilbur E. Powers, 28 W. State St., Trenton 8 |
| New Mexico | Troy Caviness, Loving |
| New York | Leslie C. Jayne, Education Bldg., Albany 1 |
| North Carolina | H. C. McAllister, Box 471, Chapel Hill |
| North Dakota | Homer L. Hill, Towner |
| Ohio | M. N. Ford, 21 W. Broad St., Columbus 15 |
| Oklahoma | W. D. Patterson, State Capitol, Oklahoma City 5 |
| Oregon | Robert A. Campbell, 302 Selling Bldg., Portland 5 |
| Pennsylvania | Wilbur B. Goodyear, Education Bldg., Harrisburg |
| Puerto Rico | Carlota Badillo Vadi, Box 229, San Juan |
| Rhode Island | Joseph J. Cahill, Ex. Officer, Dept. of Health, Div. Food and Drug Control, State Office Bldg., Providence 2 |
| South Carolina | T. D. Wyatt, Spartanburg |
| South Dakota | Bliss C. Wilson, Pierre |
| Tennessee | Robert T. Walker, 822 Bennie-Dillon Bldg., Nashville 3 |
| Texas | Walter Cousins, Jr., 516 Browder St., Dallas 1 |
| Utah | Frank E. Lees, Asst. Dir. and Ex. Sec., Dept. of Business Regulation, Registration Division, Salt Lake City 1 |
| Vermont | Hazen J. Russell, Lyndonville |
| Virginia | A. L. I. Winne, 1103 E. Main St., Richmond 19 |
| Washington | Bert Densow, Legislative Bldg., Olympia |
| West Virigina | Roy B. Cook, Box 467, Charleston 28 |
| Wisconsin | S. H. Dretzka, 161 W. Wisconsin Ave., Milwaukee |
| Wyoming | R. S. Halliwell, Lovell |

# NATIONAL PHARMACEUTICAL PUBLICATIONS

| NAME | EDITOR OR MANAGER |
|---|---|
| American Druggist | John W. McPherrin, 572 Madison Ave., New York 22, N. Y. |
| American Journal of Pharmaceutical Education | Rufus A. Lyman, University of Arizona, School of Pharmacy, Tucson, Ariz |
| American Journal of Pharmacy | Linwood F. Tice, 43rd and Kingsessing Ave., Philadelphia 4, Pa. |
| American Professional Pharmacist | Madeline Oxford Holland, 67 Wall St., New York, N. Y. |
| Bulletin, American College of Apothecaries | Charles V. Selby, 411 W. Main St., Clarksburg, W. Va. |
| Bulletin of the American Society of Hospital Pharmacists | Don E. Francke, University Hospital, Ann Arbor, Mich. |
| Chain Store Age—Druggist Edition | John C. Helenore, 185 Madison Ave., New York, N. Y. |
| Drug and Allied Industries | O. J. Willoughby, 1070 Spring St., N. W., Atlanta, Ga. |
| Drug and Cosmetic Industry | Thomas R. Farrell, 101 W. 31st St., New York, N. Y. |
| Drug Topics and Drug Trade News | Robert L. Swain, 330 W. 42nd St., New York, N. Y. |
| El Farmaceutico<br>Pharmacy International | R. T. Turner, 330 W. 42nd St., New York 18, N. Y. |
| Journal of the American Pharmaceutical Association, Practical Pharmacy Edition | Robert P. Fischelis, 2215 Constitution Ave., N. W., Washington, D. C. |
| Journal of the American Pharmaceutical Association, Scientific Edition | Justin L. Powers, 2215 Constitution Ave., N. W., Washington, D. C. |
| La Farmacia | Harry H. Costello, 122 E. 42nd St., New York, N. Y. |
| N. A. B. P. Bulletin | P. H. Costello, 77 W. Washington St., Chicago 2, Ill. |
| N. A. R. D. Journal | Peter J. Sletterdahl, 205 W. Wacker Drive, Chicago 6, Ill. |
| Oil, Paint and Drug Reporter | Hugh Craig, 59 John St., New York 7, N. Y. |
| The Wholesale Drug Salesman | Hugh O'Malley, 221 N. LaSalle St., Chicago, Ill. |

# SECTIONAL, STATE, AND LOCAL PUBLICATIONS

| NAME | EDITOR OR MANAGER |
|---|---|
| Allegheny County Pharmacist | Wm. H. Whitman, 624 Bessemer Bldg., Pittsburgh, Pa. |
| Apothecary | John L. Heaton, 376 Boylston St., Boston, Mass. |
| Arizona Pharmacist | Newell Stewart, 502 N. Central Ave., Phoenix, Ariz. |
| Arkansas Druggist | Ray McSpadden, 217 E. Third St., Little Rock, Ark. |
| C. R. D. A. News | John M. Myers, 32 W. Randolph St., Chicago, Ill. |
| Carolina Journal of Pharmacy | W. J. Smith, Chapel Hill, N. C. |
| Central Pharmaceutical Journal | Joseph J. Shine, 221 N. La Salle St., Chicago 1, Ill. |
| Connecticut Pharmacist | Alice-Esther Garvin, 20 Lake Place, New Haven, Conn. |
| Delaware Pharmacist | J. Wallace Watson, Medical Arts Bldg., Wilmington, Del. |
| Delaware County Pharmacist | Abraham Lachman, 102 Pine Ridge Road, Media, Pa. |
| Drug Progress | Thomas J. Vratny, 77 W. Washington St., Chicago, Ill. |
| Florida Pharmaceutical Journal | R. Q. Richards, Fort Myers, Fla. |
| Indiana Pharmacist | Henry W. Heine, 8 N. Senate Ave., Indianapolis, Ind. |
| Iowa Pharmacist | D. L. Bruner, 842 Des Moines Bldg., Des Moines 9, Iowa |
| K. P. A. News | Clara B. Miller, 824 Kansas Ave., Topeka, Kans. |
| Kentucky Pharmacist | E. M. Josey, 213 St. Clair St., Frankfort, Ky. |
| Louisiana Pharmacist | John F. McCloskey, 2935 Calhoun St., New Orleans 15, La. |
| Maryland Pharmacist | Melville Strasburger, 10 W. Chase St., Baltimore, Md. |
| Michigan Journal | R. T. Lakey, 1208 Francis Palms Bldg., Detroit 1, Mich. |
| Minnesota Pharmacist | Henry M. Moen, 2639 University Ave., St. Paul 4, Minn. |
| Midwestern Druggist | J. Will Kelley, 610 Twenty West Ninth St. Bldg., Kansas City, Mo. |
| Missouri Pharmacist | O. R. Sutton, 309 Central Trust Bldg., Jefferson City, Mo. |
| National Capital Pharmacist | Al Obert, 913 Union Trust Bldg., Washington, D. C. |
| Nebraska Mortar and Pestle | Cora Mae Briggs, 410 Fed. Sec. Bldg., Lincoln 8, Nebr. |
| New Jersey Journal of Pharmacy | John J. Debus, 28 W. State St., Trenton, N. J. |
| New York State Pharmacist | Curt P. Wimmer, 1261 Broadway, New York 1, N. Y. |
| Northern California Drug News | Walter Guerich, 904 Cunard Bldg., 503 Market St., San Francisco, Calif. |
| Northern Ohio Druggist | Wm. A. Maynard, 1935 Euclid Ave., Cleveland 15, Ohio |
| Northwestern Druggist | E. M. Dockstader, 2642 University Ave., St. Paul 4, Minn. |
| O. V. D. A. Review | Harold C. Freking, 1014 Race St., Cincinnati 2, Ohio |
| Oklahoma Pharmacist | Elbert R. Weaver, 620 Main St., Stillwater, Okla. |
| P. A. R. D. Bulletin | Hyman C. Bogash, 2017 Spring Garden St., Philadelphia 30, Pa. |
| Pacific Drug Review | W. C. Felter, 504 Woodlark Bldg., Portland 5, Ore. |
| Pennsylvania Pharmacist | C. E. Rickard, 508 N. Third St., Harrisburg, Pa. |
| Rocky Mountain Druggist | Verne N. Seeley, 1441 Welton St., Denver 2, Colo. |
| St. Louis Retail Druggists' News | Herm Winkelmann, 6719 Leona, St. Louis, Mo. |
| South Dakota Journal of Medicine and Pharmacy | Bliss C. Wilson, Pierre, S. Dak. |
| South Jersey Pharmacist | A. Charles Corotis, Market St. at 5th, Camden, N. J. |
| Southeastern Drug Journal | Russell D. Rainey, 306 Bona Allen Bldg., Atlanta 3, Ga. |
| Southern Pharmaceutical Journal | Walter Cousins, Jr., 516 Browder St., Dallas, Texas |
| Texas Druggist | LeGene Lott, 503 Littlefield Bldg., Austin, Texas |
| Utah Pharmaceutical Association Bulletin | Earle F. Gardemann, Zion's Savings Bank Bldg., Salt Lake City, Utah |
| Virginia Pharmacist | J. C. Nottingham, 205 West Grace St., Richmond, Va. |
| West Coast Druggist | Bert Butterworth, 1606 N. Highland Ave., Hollywood 28, Calif. |
| West Virginia Pharmacist | William J. Dixon, Po Box 119, Oak Hill, W. Va. |
| Wisconsin Druggist | Jennings Murphy, 161 W. Wisconsin Ave., Milwaukee, Wis. |

# ALPHABETICAL LIST OF MEMBERS

## HONORARY MEMBERS

Cameron, John (27), The Bungalow, Corrie, Arran, Scotland
Durham, Carl T. (43), Chapel Hill, North Carolina
Hooper, David (99), 5 Lower Church Road, Weston super Mare, Somerset, England
Kolthoff, I. M. (24), University of Minnesota, Minneapolis, Minnesota
Noriega, Juan Manuel (29), National University of Mexico, Mexico City, Mexico
Ostwald, Wolfgang (29), University of Leipzig, Leipzig, Germany
Parada, Armando S. (30), Carilla 2532, Santiago, Chile, South America
Perrot, Emile (23), University of Paris, Paris, France
Thomann, Col. J. (39), Kollerweg 9, Berne, Switzerland
Urdang, George (32), University of Wisconsin, Madison, Wisconsin
Van Itallie, L. (23), Amerongen, The Netherlands
Wallner, Rudolf (39), Firnhaber Strasse 37, D. P. Camp Hochfeld, Augsburg, American Zone, Germany
Wasicky, Richard (37), Rua Maranhao 600, São Paulo, Brazil, South America

## ACTIVE MEMBERS

This list corrected to October 31, 1949

Associate (Student) Members are not listed. The names of Life Members are in capitals. The number in parenthesis after each name indicates the year continuous membership began.

*Members are urged to advise the* ASSOCIATION *if address is incorrect. The* ASSOCIATION *will not replace publications lost through change of address of which it has received no notice.*

## A

Aabel, Bernard (46)
American Legation, Helsinki, Finland.
Aaron, Bernard (45)
664 Mt. Prospect Ave., Newark, N. J.
Aaronson, Malvin S. (44)
1470 N. 52nd St., Philadelphia 31, Pa.
Abarbanel, Abraham M. (45)
109 Ben-Yehuda, Tel-Aviv, Israel.
Abbey, Edward H. (46)
812 S. Washington St., Peoria 1 Ill.
Abbott, David (46)
623 N. Norwalk Blvd., Whittier, Calif.
Abbott, John H. (47)
45 Washington St., Concord, N. H.
Abbott, Thomas A. (48)
55 Tillman St., Geneva, N. Y.
Abel, William Joseph (47)
2312 Cleburne, Apt. 1F, Houston, Tex.
Abend, Carl A. (37)
Box 166, R. R. 4, Farmington Mich.
Aberbach, Hyman (33)
1072 Clinton Ave., Irvington, N. J.
Abey, Clarence E. (46)
S. 329 Cedar, Spokane 9, Wash.
Abou Chaar, Charles (38)
American University, Beirut, Lebanon.
Abrahamson, Myrtle F. (48)
Richmond Hospital, 23rd St. & Gaynor Ave., Richmond, Calif.
Abram, James W. (49)
237 W. Union St., Somerset, Pa.
Abrams, Harry (43)
829 N. 7th St., Kansas City, Kan.
Abrams, Jerome (45)
2731 N. Park Blvd., Cleveland Heights 18, Ohio.
Abrams, Murray (48)
1801 Fairfax Rd., Rosemont, Pa.
Abrams, O. Paul (40)
1002 S. Gaffey St., San Pedro, Calif.
Abrams, Robert (46)
139 Roseberry St., Philadelphia 48, Pa.
Abramson, Bernard (47)
36 Oakwood Ave., White Plains, N. Y.
Abramson, Milton D. (48)
8050—14th St., Detroit 6, Mich.
Abramson, Philip (46)
285 Clinton Ave., Newark 8, N. J.
Abramson, Sidney H. (48)
4762 N. Rorer St., Philadelphia 20, Pa.
Abreu, Benedict E. (45)
Research Dept., Pitman-Moore Co., 1200 Madison Ave., Indianapolis, Ind.
Abrutyn, Herbert I. (45)
753 Bergen Ave., Jersey City 5 N. J.
Accettullo, Anthony (45)
233 Proctor Ave., Revere, Mass.
Acheson, Robert A. (25)
49 Lincoln St., Belmont, Mass.
Ackerman, Karl H. (44)
5550 W. Quincy, Chicago, Ill.
Ackerman, Lyle E. (47)
1302 Fulton Rd., N. W., Canton 3, Ohio.
Ackerman, Morris (47)
779 S. 16th St., Newark 3, N. J.
Acton, Morris Goodwin, Jr. (39)
1332 Midland Ave., Bronxville 8, N. Y.
Actor, Leonard (49)
524 E. Luray St., Philadelphia 20, Pa.
Adamaszek, Emelia (48)
2040 E. Grand Blvd., Detroit 11, Mich.
ADAMICK, GUSTAVE HATTENHAUER (91)
646 N. Michigan, Chicago 11, Ill.
Adamo, Martin E. (28)
80 Arlington St., Boston, Mass.
Adams, A. Lee (39)
309 Park Ave., Glencoe, Ill.
Adams, Amy K. (44)
1026 N. 5th St., Reading, Pa.
Adams, Antoinette E. (38)
1117 E. 79th St., Cleveland, Ohio.
Adams, C. C. (44)
Peachtree Sanitarium, 41 Peachtree Place, N. E., Atlanta, Ga.
Adams, H. W. (45)
Chickasaw Drug Co., Chickasaw, Ala.
Adams, Harry W. (49)
2252 N. Western Ave., Chicago 47, Ill.
Adams, J. L. (49)
650 Grande Ave., Box 97, Del Norte, Colo.
Adams, James R. (49)
610 Ridgewood Ave., Holly Hill, Fla.
Adams, John G. (48)
2801 Veteran St., Pittsburgh 14, Pa.
Adams, Lacey B. (46)
1862 N. Allen Ave., Apt. A, Pasadena 7, Calif.
Adams, Margaret (46)
62 Rockwood Ave., Ansonia, Conn.
Adams, Raymond E. Jr. (47)
R. R. 6, Box 630-C, Indianapolis 44, Ind.
Adams, Robert Gordon (47)
Westover Rd., Morrisville, Pa.
Adams, Vito (44)
237 Wood River Ave., Wood River, Ill.
Adams, Walter D. (13)
Forney, Tex.
Adams, W. M. (46)
2401 Marshall St., Vicksburg, Miss.
Adamson, Clyde F. (46)
409 Pittsburgh St., Springdale, Pa.
Addleman, Theodore B. (46)
137 S. Penn. Ave., Oberlin, Kan.

Adelman, Morris (49)
46 W. State St., Trenton 8, N. J.
Adelman, Paul (48)
301 Judson, San Francisco 12, Calif.
Adelson, Irving (48)
604 Oak St., Farmville, Va.
Adelstein, Jerome (45)
17612 Throckley Ave., Cleveland 20, Ohio
Adkins, Herbert W. (47)
3479 N. Shepard Ave., Milwaukee 11, Wis.
Adkinson, O. J. (49)
397 Front St., Woodburn, Oreg.
Adkisson, Elliott (48)
Route 4, Box 107, Visalia, Calif.
Adler, Marie V. (45)
7145 Ridgeland Ave., Chicago 49, Ill.
Adolph, Edward Harnisch (28)
Rte. 1, Sufferen Park, Sufferen, N. Y.
Affleck, A. J. (38)
1008—10th St., Sacramento, Calif.
Africk, Hyman (45)
Oak Ridge Hospital, Oak Ridge, Tenn.
Agin, Samuel (49)
1501 Boston, Rd., Bronx 60, N. Y.
Agin, Sara A. L. (45)
14 W. Main St., Fleetwood, Pa.
Agnello, Mary C. (46)
White Ave., Knox, Pa.
Agnew, C. G. (47)
616–16th Ave., East Moline, Ill.
Agnew, Ruth E. (48)
1307½ Baker Ave., Augusta, Ga.
Agostinelli, Alfred H. (48)
123 Pittsburgh Circle, Ellwood City, Pa.
Agras, Anthony J. (48)
178 Pearl St., Cambridge, Mass.
Aguirre, Jose R. (49)
Jose de Diego St., No. 42, Cayey, P. R.
Ahlquist, R. P. (41)
Dept. of Pharm., Univ. of Ga. Med. School, Augusta, Ga.
Ahmed, Z. F. (46)
School of Pharmacy, Fouad 1st Univ., Kasre El Einy, Cairo, Egypt
Ahrens, Robert G. (45)
442 Main St., Oneida, N. Y.
Aimar, Harold A. (43)
409 King St., Charleston, S. C.
Ainsworth, Frank A. (49)
Monticello, Miss.
Airston, Margaret (47)
Univ. of So. Calif., Los Angeles 5, Calif.
Aisawa, Saburo (47)
1110—6th St., S. E., Minneapolis 14, Minn.
Akerman, R. D. (46)
112 N. Lebanon, Lebanon, Ind.
Akins, George H. (49)
Washoe County Gen. Hosp., Washoe & Mill Sts., Reno, Nev.
Alario, Charles I. (47)
157 Linden Ave., Arlington, N. J.
Albaugh, Martin G. (49)
1060 Piermont Rd., South Euclid 21, Ohio
Albers, Carl Clarence (25)
University Station, Austin, Tex.
Albers, Edward S. (44)
400 State St., Knoxville 3, Tenn.
Albert, Arnold B. (44)
232 S. Orange Ave., Orlando, Fla.
Albertson, Gordon L. (46)
5504 Westwood Dr., Des Moines, Iowa
Albrecht, William F. (48)
4303 Clagett Rd., University Park, Hyattsville, Md.
Albright, A. S. (47)
1513 S. Gallatin St., Marion, Ind.
Albright, E. Roy (45)
Albright & Wood, Mobile, Ala.
Albritton, John H. (46)
P. O. Box 804, Forrest City, Ark.
Alcott, Floyd (49)
724 Excelsior Ave., Hopkins, Minn.
Alderman, Allen M. (48)
524 Rockingham St., Rochester, N. Y.
Alderson, Earl L. (47)
243 Pacific Coast Highway, Hermosa Beach, Calif.
Aldrich, Darwin F. (44)
Rte. 7, Box 282, Terre Haute, Ind.
Aldridge, Stanley P. (48)
104 Marticle St., Cedartown, Ga.
Aleknaa, Emily A. (49)
648 Westminster Dr., Pasadena 2, Calif.
Alessini, Dan J. (43)
324 South K. St., Madera, Calif.
Alexander, Doris-Rae (49)
4916 N. E. Prescott, Portland 13, Oreg.
Alexander, Earl G. (49)
631 Broadway, Plainview, Tex.
Alexander, Edgar E. (39)
Tuskegee Institute, P. O. Box 623, Tuskagee, Ala.
Alexander, James G. (49)
8 Brookhaven Dr., Atlanta 5, Ga.
Alfieri, Anthony J. (47)
3406 W. 8th St., Cincinnati 5, Ohio.
Alfonso, R. G. (42)
9957 Forest, Detroit, Mich.
Alford, Charles E. (46)
64 Delaware Ave., Delmar, N. Y.
Alford, E. E. (44)
7001 S. E. Milwaukee Ave., Portland, Oreg.
Algeo, Joseph A. (46)
12 Summitt St., Hastings-on-Hudson 6, N. Y.
Algeo, Thomas L. (46)
677 Washington Rd., Pittsburgh 16, Pa.
Allar, Samuel S. (46)
139 Locust Hill Ave., Yonkers, N. Y.
Allen, Benjamin F. (37)
4416 Hillside Ave., Baltimore 29, Md.
Allen, Buford C. (49)
Liberty, Ky.
Allen, Caroll F. (42)
1401 S. Hope, Rm. 326, Los Angeles, Calif.
Allen, Clark (48)
913 Main St., Racine, Wis.
Allen, Edgard Y. (40)
593 Riverside Dr., Aprt. 6F, New York 31, N. Y.
Allen, Edward L. (44)
32 State St., Bangor, Me.
Allen, Fred C. (34)
Marlinton, W. Va.
Allen, G. E. (48)
1105 W. 2nd, McCook, Neb.
Allen, J. W. (46)
Triple J. Ranch, Genoa, Nev.
Allen, Jack (49)
802 N. Lombard St., Portland 3, Oreg.
Allen, James E. (47)
411 S. Capitol St., Washington, D. C.
Allen, Joseph S. (48)
% G. E. Allen, R. F. D., Richmond, Utah.
Allen, R. David (45)
50 Irving Terrace, Kenmore 17, N. Y.
Allen, Robert F. (49)
127 E. Flint St., Lake Orion, Mich.
Allen, Walter H., Jr. (46)
906 W. 36th St., Los Angeles 7, Calif.
Allen, Willard B. (48)
402 Prescott Ave., Scranton 10, Pa.
Allen, William T. (49)
1408–1420 E. Main, Richmond 13, Va.
Allendorf, J. R. (48)
241 Battery St., San Francisco 19, Calif.
Alley, Lehman M. (46)
8258 First Ave., N., Birmingham 6, Ala.
Alley, Marion S. (36)
1928 Eye St, N. W., Washington, D. C.
Allison, A. T., Jr. (42)
Kemp Drug Store, Kemp Hotel Building, Wichita Falls, Tex.
Allison, Earl (49)
Route 1, South Vienna, Ohio.
Allison, John P. (46)
Box 1, Hickory Grove, S. C.
Allison, L. A., Jr. (43)
3812 Ruskin St., Houston 5, Tex.
Allison, Mack F. (44)
Frazeysburg Rd., Zanesville, Ohio
Allmark, M. Gordon (47)
35 John St., Ottawa, Canada
Alloway, S. Bascombe (47)
2618 Parade St., Erie, Pa.
Allred, Bryce C. (48)
3960 S. E. Gladstone Ave., Portland, Oreg.
Allred, G. K. (49)
Pocatello Heights 2-K, Pocatello, Idaho
Almen, Rugnar (48)
4941–17 Avenue South, Minneapolis 17, Minn.
Almgren, Claus R. (47)
106 Lincoln St., E. Bakersfield, Calif.
Almquist, Richard W. (45)
1435 W. 6th St., Red Wing, Minn.
Alonso, Wesley J. (49)
1647½ Birlington Ave. N., St. Petersburg 6, Fla.
Alotta, Peter J. (49)
88 Grove St., Cooperstown, N. Y.
Alpern, Jacob (46)
18 Fulton St., Freehold, N. J.
Alpert, Irving F. (49)
653 High St., Newark 2, N. J.
Alpert, Jacob (48)
1310 N. Alta Vista Blvd., Los Angeles 46, Calif.
Alsdorf, William H. (48)
222 Jefferson, Hyde Park, Reading, Pa.
Alstodt, Berl S. (36)
89–18—184th St., Hollis, N. Y.
Alt, Herman (45)
43 North Park, Buffalo 16, N. Y.
Altbach, Hyman (49)
1854 Hendrickson St., Brooklyn, N. Y.
Altman, Bert (48)
2637 Proctor, Waco, Tex.
Altman, Edward M. (39)
236 Westminster St., R. 605, Alice Bldg., Providence, R. I.
Altschul, Justin A. (49)
649 Dartmouth, S. W., Canton, Ohio.
Altshul, Emmett M. (48)
86 Sydney Ave., Deal, N. J.
Altshul, Harold M. (44)
Box 911, CSA, New York 8, N. Y.
Alvarez, Herman (48)
Esperanza, San German, Puerto Rico
Alvarez-Silva, M. J. (48)
Carrera 20, 293, Farmacia Sigala, Barquisimeto, Lara, Venezuela
Alvariz, Miguel Guerrero (46)
Monte #452, Habana, Cuba
Alven, Adolph R., Sr. (47)
458 Central Ave., Jersey City 7, N. J.
Ambes, Leonore O. (44)
235 N. E. Stafford Portland 11, Oreg.
Ameiss, Vincent R. (49)
c/o The Blue Lime Chemical Co., 302 S. Broadway, St. Louis 2, Mo.
Amemiya, George H. (47)
610 N St., Sacramento, Calif.
Ames, Dale D. (48)
630 Divisadero St., San Francisco 17, Calif.
Amico, Vincent (48)
411 E. 2nd St., Brooklyn 18, N. Y.
Amicone, Michael A. (49)
1411 Fleming Ave., Pittock, Pa.
Amin, Ramanbhai C. (48)
65 (Urmi), Worli Sea Face, Bombay, India.
Amole, Warren R., Jr. (46)
Medical Arts Pharmacy, Great Falls, Mont.
AMOS, WILBER STANTON (08)
Naperville, Ill.
Amsterdam, Herman J. (38)
587 Montgomery St., Brooklyn 25, N. Y.
Analogidis, Christos (47)
Pharmacie C. A. Dambergis, 39 Venizelos Ave., Athens, Greece
Anconetani, Blanche (42)
265 S. Ithan St., Philadelphia, Pa.
Anderson, Adolph Emil (13)
1332—14th St., Moline, Ill.
Anderson, Anson R. (47)
604 Locust St., Wamego, Kans.
Anderson, Boyce C. (46)
4610 Caroline, Houston 4, Tex.
Anderson, Ednah Blanche (23)
Stanhope, Iowa.
Anderson, Eleanor (49)
12850 Rutland, Detroit 27, Mich.
Anderson, Emory E. (46)
101 W. Spring St., Palestine, Tex.
Anderson, Ernest A. (47)
101 S. Main St., Aberdeen, S. Dak.
Anderson, George A. (28)
81 Maiden Lane, New York, N. Y.
Anderson, Harold F. (45)
440 Roosevelt Ave., Eau Claire Wis.

Anderson, Harvey Lee (42)
2605 N. 12th St., Sheboygan, Wis.
Anderson, J. Russell (41)
Parke, Davis & Co., Detroit, Mich.
Anderson, K. R. (45)
Larkspur Pharmacy, 472 Magnolia, Larkspur, Calif.
Anderson, Kenneth E. (45)
Saginaw General Hospital, Saginaw, Mich.
Anderson, L. M. (46)
Victoria, Kans.
Anderson, Meriwether L. (48)
4560 Audubon Ave., St. Louis 6, Mo.
ANDERSON, OLIVER G. (30)
Eli Lilly & Co., Indianapolis, Ind.
Anderson, Otto H. (45)
805 Main St., Fitchburg, Mass.
Anderson, Paul C. (45)
915 E. 1st St., Duluth 5, Minn.
Anderson, R. David (46)
1200 E. Marshall St., Richmond, Va.
Anderson, Ralph Edward (43)
10 Cedar Ave., Jamaica Plain, Mass.
Anderson, Ralph G. (45)
800 E. Ocean Blvd., Apt. 1409, Long Beach 2, Calif.
Anderson, Ray M. (36)
708 E. Second St., Merrill, Wis.
Anderson, Robert C. (42)
317 Cecil, Indianapolis 19, Ind.
Anderson, Robert R. (49)
127 W. 138th St., New York 30, N. Y.
Anderson, Robert M. (48)
Anderson Drug Co., Winter Haven, Fla.
Anderson, Wilbur C. (46)
Dir. Tech. Section, Pharmacy Division, Veterans Adm., Central Office, Washington 25, D. C.
Andes, Harry J. (45)
23 N. Loveland Ave., Kingston, Pa.
Ando, Ruri (47)
Rt. 2, Box 177, Cupertino, Calif.
ANDREAU, R. L. (30)
4227 Van Nuys Blvd., Sherman Oaks, Calif.
Andreini, Albert J. (47)
5532 Bergenline Ave., West New York, N. J.
Andrews, Henry D. (47)
425 N. Sixth St., Apt. 1, Baton Rouge, La.
Andrews, Marvin J. (24)
5505 Stuart Ave., Baltimore 15, Md.
Andrews, William F. (41)
227 Belmont Ave., Detroit 2, Mich.
Andropolis, Jacob (45)
902 Michigan Ave., Sheboygan, Wis.
Angelastro, Nicholas (45)
74 S. 27th St., Camden, N. J.
Angelico, Blaise N. (48)
5656 Woodlawn Pl., New Orleans 19, La.
Angelo, Michael C. (48)
492 Ferry St., Newark 5, N. J.
Anglade, Enrique (45)
Guayama, Puerto Rico.
Anions, Chrisanthi (44)
40 Sweeny St., San Francisco, Calif.
Ankcorn, John J. (46)
1025 N. W. 23rd Ave., Portland 10, Oreg.
Annino, Josephine D. (47)
436 Main St., W. Springfield, Mass.
Annis, George W. (47)
98–41 65th Ave., Forest Hills, N. Y.
Anopol, Annie (46)
892 Columbus Ave., New York 25, N. Y.
Antig, Joseph E. (49)
613 Summit Ave., Union City, N. J.
Ansell, Max S. (47)
St. Paul & Madison Sts., Baltimore 2, Md.
Anselmi, Francisco L. (45)
Jose I. Quinton St., P. O. Box 166, Coamo, Puerto Rico.
Anselmo, Peter C. (40)
598 Tenth Ave., New York 18, N. Y.
Antle, Edwin E. (47)
1901 Madison Ave., St. Louis, Mo.
Antonelli, Joseph (49)
517 Wenonah, Oak Park, Ill.
Antonides, James (45)
Purdue University, School of Pharmacy, Lafayette, Ind.
Antonow, Samuel L. (39)
Belmont Hotel, Chicago, Ill.

Antoshkiw, Thomas (49)
508 E. 33rd St., Paterson, N. J.
Anzano, Octavius P. (49)
4500 Hudson Blvd., Union City, N. J.
Aoki, Jhosey W. (49)
2028 Algaroba St., Honolulu 27, T. H.
Apitz, Fred W. (47)
6242 Bellona Ave, Baltimore 12, Md.
Aponte, José I. (39)
Ferris Institute, Big Rapids, Mich.
Apostol, Eden (47)
North General Hosp., Espana, Sampaloc, Manila, P. I.
Appel, Alice M. (45)
Pharmacy Dept., Seaside Hospital, Long Beach 13, Calif.
Appel, David M. (43)
1444 Lunt Ave., Chicago, Ill.
Appel, William I. (43)
3952 Lyndale Ave., S., Minneapolis 8, Minn.
Appelbaum, Joseph (48)
327 Grand St., Paterson, N. J.
Appelo, Rosalind S. (46)
Deep River, Wash.
Appelstein, Frank (45)
1045 N. Fulton Ave., Baltimore 17, Md.
Applebaum, David (49)
3017 Fullerton, Detroit 6, Mich.
Applebaum, Emanuel K. (47)
1 Hudson St., Clifton, N. J.
Applegate, G. Joseph (49)
510 A St., N. E., Bentonville, Ark.
Appleton, B. G. (47)
Warren, Ark.
APPLETON, W. R. (01)
Lock Box 389, Warren, Ark.
Applezweig, Norman (46)
101 W. 60th St., New York, N. Y.
Applin, George F. (39)
311 N. 3rd St., Philadephia, Pa.
Apyar, Edward S. (48)
1220 Maple Ave., Monessen, Pa.
Aqua, Isadore (48)
1123 Ritner St., Philadelphia 48, Pa.
Aramburu, Alejo (47)
Ribera 20, Plencia, Vizcaya, Spain.
Aranoff, Leo (46)
Winter Haven Hotel, 1402 Ocean Dr., Miami Beach 39, Fla.
Arase, George K. (44)
4359 Oakenwald St., Chicago 15, Ill.
Archambault, George F. (31)
Hospital Div., U. S. Public Health Service Washington 25, D. C.
Archbold, Charles J. (45)
3146 Euclid Ave., Cleveland Osteopathic Hospital, Cleveland 15, Ohio.
Archer, Bent Edison (47)
c/o Pharmacy, U. S. Vets Hospital, American Lake, Wash.
Archer, John J. (47)
522 Good St., Houtzdale, Pa.
Archer, John J., Jr. (46)
1213 St. Mary St., New Orleans 13, La.
Archer, Sam. H. (48)
3407 E. Murdock, Wichita, Kans.
Archer, Theodore (27)
White Hall, Md.
Arena, Homer P. (40)
N. J. Sanitorium, Glen Gardner, N. J.
Arenas, Angelina L. (48)
National Psychopathic Hospital, Mandaluyong, Rizal, Philippines.
Arens, J. Carl (40)
86 Elmwood Dr., Highland Park, Ill.
Arensberg, George W. (46)
176 Hudson Ave., Newark, Ohio.
Arimoto, Ichiro J. (48)
304 Irving St., San Francisco, Calif.
Arita, George (49)
6021 S. Harper Ave., Chicago 37, Ill.
Arky, Arthur (46)
118 N. Broadway, South Amboy, N. J.
Arky, Edward (43)
285 Smith St., Perth Amboy, N. J.
Arlin, Ray H. (49)
215—4th St., Galt, Calif.
Armao, John J. (49)
263 Avenue W., New York 23, N. Y.
Armbruster, Henry J. (46)
505 Arch St., Pittsburgh, Pa.

Armbruster, Valerie C. (39)
c/o Pharmacy Dept., Charity Hosp., 1532 Tulane Ave., New Orleans, La.
Arminski, Charles S. (43)
7005 Miller Ave., Detroit 11, Mich.
Armstrong, Charles R. (47)
West Plains, Mo.
Armstrong, Earle D. (46)
2 Broad St., Hamilton, N. Y.
Armstrong, Frank D. (41)
101 N. 32nd St., Harrisburg, Pa.
Armstrong, James W. (49)
3001 Pemberton Dr., Toledo 6, Ohio.
Armstrong, L. LeRoy (47)
2314 Fifth Ave., Scottsbluff, Nebr.
Armstrong, Thomas Call (15)
U. S. Marine Hospital, Vineyard Haven, Martha's Vineyard, Mass.
Arneson, Theo. A. (34)
105 S. 1st St., Montevideo, Minn.
Arnett, Samuel (49)
3504 N. Capitol Ave., Indianapolis 8, Ind.
Arnold, Louis C. (48)
210 Genoa Ave., West Atlantic, N. J.
Arnold, Philip J. (48)
1436 Hamlet St., Columbus 1, Ohio.
Arnold, Raymond C. (45)
Warren Apts., Suite #1, 3780 Cambie St., Vancouver, B. C. Canada.
Arnoldi, Charles H. (46)
1227 Bergenline Ave., Union City, N. J.
Arnone, Ralph (47)
135 W. 6th St., San Pedro, Calif.
Arnove, I. (42)
2368 N. Clark St., Chicago, Ill.
Aronoff, Morris (47)
233 Madison St., Hoboken, N. J.
Aronstamm, George C. (45)
2363 Larkin St., San Francisco, Calif.
Arozarena, Ramón I. (42)
Apartado 127, Caracas, Venezuela, S. A.
Arps, Joan (47)
7310—34th S. W., Seattle 6, Wash.
Arrigo, Frank J. (48)
330 Belgrade Ave., Roslindale 31, Mass.
ARRIGONI, LOUIS (47)
Consolidated Dairy Products, 635 Ellcott W., Seattle, Wash.
Artale, Frank F. (48)
90 Kenwood Rd., Garden City L. I., N. Y.
Arzoomanian, Estella (49)
315 Main Street, Charlestown 29, Mass.
Asal, J. M. (47)
Cor. Front & Central, Cascade, Mont.
Asano, Akiro (48)
c/o Sharpe & Dohme, Inc., Glenolden, Pa.
Asarkof, Eli A. (46)
47 Hiawatha Rd., Mattapan 26, Mass.
Asbel, Barnett D. (47)
199 Monroe St., Passaic, N. J.
Asche, Clifton (48)
1612 St. Charles St., Alameda, Calif.
Ascher, Gerald M. (48)
723—10th Ave., San Francisco 18, Calif.
Asenjo, Conrado Federico (39)
School of Tropical Medicine, San Juan, Puerto Rico.
Ashbury, Robert E. (46)
4207 Nottingham Rd., Detroit 24, Mich.
Ashkenaz, David M. (47)
2437 W. 77th Ave., Philadelphia 38, Pa.
Ashkin, David (45)
1353 Utica Ave., Brooklyn 3, N. Y.
Ashley, G. K. (44)
916 Washington Ave., Montpelier, Idaho.
Ashmore, John D. (41)
105 E. North St., Greenville, S. C.
Ashton, Paul A. (49)
97 W. Broad St., Hopewell, N. J.
Askin, Marley M. (46)
4600 N. Camac St., Philadelphia 40, Pa.
Asmussen, Robert E. (46)
316 E. Wright Ave., Tacoma 4, Wash.

Aspen, Peter S. (47)
505 S. Harbor Blvd., San Pedro, Calif.
Asquith, Mary E. (47)
St. Mary's Hosp., Kitchener, Ont., Canada.
Assaff, Helen (47)
5090 Washington St., West Roxbury 32, Mass.
Assenheimer, Carl H. (43)
3122 Wayne Ave., Dayton 10, Ohio.
Atchley, Homer E. (47)
c/o Cummings Drug Co., 112 W. Miner, Yreka, Calif.
Athey, La Vonne (45)
1928½ S. Meridian, Indianapolis, Ind.
Atkinson, L. M. B. (44)
5341 Nicollet Ave., Minneapolis, Minn.
Atterbury, Alexander Henry (45)
36 E. Broadway, Eugene, Oreg.
Attwood, J. K. (38)
1024 Park St., Jacksonville, Fla.
Atwater, Herbert D. (45)
St. Joseph's Hospital, Elmira, N. Y.
Atwood, Robert H. (48)
Bradenton Beach, Fla.
Auerbach, Abraham I. (47)
241-01 Linden Blvd., Elmont, N. Y.
Augenblick, Maurice L. (39)
5722 Florence Ave., Philadelphia, Pa.
Aughinbaugh, Thomas H. (46)
242 Market St., Clearfield, Pa.
Auld, Don (49)
340 Bull St., Savannah, Ga.
Ault, Roderick E. (43)
415 W. Third St., Ogallala, Nebr.
Aune, Roy A. (47)
610 E. 2nd St., Ladysmith, Wis.
Austerlitz, John S. (41)
1424 Chapin St., N. W., Apt. 24, Washington, D. C.
Austin, Amon (49)
5959 S. Michigan, Chicago 37, Ill.
Austin, Arthur O. (48)
38 Main St., Orleans, Vt.
Austin, Charles S., Jr. (42)
6729 York Rd., Baltimore 12, Md.
Austin, Frank J. (49)
N. W. Corner 5th & Lombard Sts., Philadelphia 47, Pa.
Austin, Harry W. (44)
French Hospital, San Luis Obispo, Calif.
Austin, Raymond A. (47)
144 Sunnyside Ave., Oakville, Conn.
Austin, Russell (48)
519 S. W. 6th, Portland, Oreg.
Avantario, Mildred (49)
521 Washington St., Hoboken, N. J.
Avera, Homer (45)
118 Main, Ft. Valley, Ga.
Aversa, Rocco (49)
1140 Banner Ave., Brooklyn 23, N. Y.
Avis, Clinton F. (46)
103 Broad St., Elmer, N. J.
Avis, Kenneth E. (46)
Philadelphia College of Pharm. & Sci., 43rd Kingsessing Ave., Philadelphia 4, Pa.
Axelrad, Joseph (48)
c/o Moyer's Pharmacy, 811 F St., Belmar, N. J.
Axelrod, David (47)
1702 W. Clarendon Ave., Phoenix, Ariz.
Axline, William T. (47)
Roseville, Ill.
Ayala, Peter (49)
2020 N. Gramercy Pl., Hollywood 28, Calif.
Ayer, Merritt R. (44)
7 S. Main, Perry, N. Y.
Azemard, J. A. (45)
937 E. 22nd St., Los Angeles 11, Calif.
Azize, Rosita (44)
27 William Jones St., Rio Piedras, Puerto Rico.

## B

Baarth, Otto Jr. (48)
1906-A.-N. 55th St., Milwaukee 8, Wis.
Babin, Leo J. (38)
8 Oaklawn Dr., New Orleans 20, La.
Babins, David (48)
5739 N. 12th St., Philadelphia, Pa.
Bachman, Edward A. (35)
c/o Post Office Pharmacy, 439 N. W. Broadway, Portland 9, Oreg.
Bachmann, R. O. (47)
Purdue Univ., School of Pharmacy, Lafayette, Ind.
Bachstez, Marcell (40)
c/o Carlo Erba de Mexico, S. A., Coahuila 60, Mexico, D. F.
Backman, Helen L. (46)
3009 Everett Ave., Everett, Wash.
Backos, Peter J. (48)
1201 Delaware St., Berkeley 2, Calif.
Backstatter, William J. (47)
Hampton Bays, N. Y.
Backstrum, James A. (49)
Box 42, Wilson Sta., Clairton, Pa.
Baclawski, Klotilda (45)
9008 Empire Ave., Cleveland 8, Ohio.
Bacon, Franklin J. (26)
Western Reserve Univ., Cleveland, Ohio.
Bacon, Harry W. (49)
21st & Main, Springfield, Oreg.
Bacon, Victor G. (47)
Excelsior, Minn.
Bactowsky, Edith (46)
Pharm. Dept., Jefferson Med. Coll. Hosp., 10th & Sansom St., Philadelphia 7, Pa.
Badanish, Stephen (40)
1449 Madison St., Gary, Ind.
Badger, Harry (48)
9140 W. Adams Blvd., Los Angeles, Calif.
Badgett, Jamie F. (39)
530 Sunningwell Dr., Webster Groves 19, Mo.
Badzek, Rose M. (48)
1012 Ridgley Ave., Fairmont, W.Va.
Badzmierowski, Conrad J. (49)
4218 Archer Ave., Chicago 32, Ill.
Baer, Harold (46)
101 Ocean Ave., Jersey City 5, N. J.
Bagan, Samuel (47)
647 Bloomfield Ave., Montreal, P. Q., Canada.
Baglione, Frank A. (49)
2215 D. St., Sacramento 16, Calif.
Bahr, John A. (47)
1536 S. Comstock, Milwaukee 4, Wis.
Bahrij, Stanley M. (46)
5135 S. California Ave., Chicago 32, Ill.
Baier, Joseph T. (46)
1016 Ohio St., Oshkosh, Wis.
Baier, W. E. (41)
Calif. Fruit Growers' Exchange, Research Dept., 616 E. Grove St., Ontario, Calif.
Bailen, Albert Jay (47)
441 E. 2nd St., Brooklyn 18, N. Y.
Bailey, Al J. (48)
1963 E. 4th, Olympia, Wash.
Bailey, Aubrey M. (47)
Karnes City, Tex.
Bailey, Harold S., Jr. (43)
F-97 W. State St., West Lafayette, Ind.
Bailey, Hubert C. (46)
P. O. Box 51, Riverside, Ala.
Bailey, John F. (48)
16 Wood Cliffe Terrace, Buffalo 21, N. Y.
Bailey, Joseph (44)
5504 Tilden Ave., Brooklyn 3, N. Y.
Bailey, Leon E. (49)
4022 Euclid Blvd., Youngstown, Ohio.
Bailey, Louis (47)
6407 Beechwood Ave., Detroit 10, Mich.
Bailey, Mark B. (48)
2029 N. 23rd St., Milwaukee, Wis.
Bailey, Ralph W. (46)
130 Cedar St., New York 6, N. Y.
Bailey, Samuel L. (46)
Quincy, Calif.
Bailly, Louis H. (45)
1 Lilley Ave., Lowell, Mass.
Baim, Robert (46)
316 Michigan St., Toledo 2, Ohio.
Baima, Thomas D. (47)
6 E. Randolph St., Chicago 1, Ill.
Bain, George (48)
314 Scott St., San Francisco 17, Calif.
Baird, Charles (48)
2666 Broadway, Redwood City, Calif.
Baird, Richard E. (49)
423 Pleasant, Beloit, Wis.
Baker, Bella (46)
63 North St., Georgetown, Mass.
Baker, Bryan H. (49)
506 S. Saginaw St., Flint 3, Mich.
Baker, Charles G. (39)
63 North St., Georgetown, Mass.
Baker, C. M. (30)
Periodical Dept., Univ. of Kan. Library, Lawrence, Kan.
Baker, Edgar M. (40)
415 Allison Ave., S. W., Roanoke, Va.
Baker, Gertrude M. (48)
538 N. Louise St., Glendale 6, Calif.
Baker, Glenn S. (48)
1622—36th Ave., San Francisco 22, Calif.
Baker, Harry E., Sr. (47)
211 Mauna Loa, Monrovia, Calif.
Baker, Howard L. (37)
4123 Edith Ave., Cincinnati 27, Ohio.
Baker, Jean A. (46)
3373 N. Colorado Ave., Indianapolis 18, Ind.
Baker, John H. (49)
1346—2nd Ave., S., Fargo, N. Dak.
Baker, Keith W. (47)
c/o Watters Drug Store, West Liberty, Iowa
Baker, Norman N. (46)
Norfolk Gen. Hospital Pharmacy, Norfolk 7, Va.
Baker, William B. (31)
155 E. 47th St., Apt. 9A, New York, N. Y.
Baketel, H. Sheridan (38)
155 Van Wagenen Ave., Jersey City, N. J.
Bakke, Glenn O. (48)
Croft Drug Co., Sterling, Colo.
Bakkers, Andrew (46)
11500 Michigan Ave., Chicago 28, Ill.
Balaban, Charles (49)
1194 Yorkship Square, Camden, N. J.
Balassone, Francis S. (46)
140 N. Denison St., Baltimore 29, Md.
Balber, Solomon (44)
151 Howard Ave., New Haven, Conn.
Baldinger, Lawrence (30)
814 E. Corby St., South Bend, Ind.
Baldridge, Gerald W. (46)
1416 Whitcomb Ave., Des Plaines 7, Ill.
Baldwin, Wilbur C. (46)
106 W. Second St., Seymour, Ind.
Balistee, Rocco G. (49)
P. O. Box 253, Westwood, N. J.
Ball, Arthur H. (47)
1329½ Colburn St., Toledo 9, Ohio.
Ball, Eugene H. (47)
Hayti, Mo.
Ball, Homer Milton Todd (44)
3400 Whittier Blvd., Los Angeles 23, Calif.
Ball, James F., Jr. (47)
417 Green St., Augusta, Ga.
Ball, Quindaro S. (45)
Heyden Chemical Corp., 393 Seventh Ave., New York, N. Y.
Ballard, A. F. (45)
Elm St., Millbury, Mass.
BALLARD, CHARLES WILLIAM (08)
115 W. 68th St., Columbia University, New York, N. Y.
Ballentine, Keith D. (47)
c/o Buenz Drug Co., Ogallala, Nebr.
Ballentine, Robert William (45)
818 Willow St., Port Huron, Mich.
Ballew, James G. (45)
Lenoir, N. C.
Ballew, Paul K. (47)
303 Louisa Ave., Dupo, Ill.
Ballin, Abraham W. (49)
3803 Roosevelt Rd., Chicago 24, Ill.
Ballin, E. (45)
Route 1, Box 437, Alhambra Way, Martinez, Calif.

Ballinger, Joseph P. (46)
City Drug Co., Bastrop, La.
BALMERT, CLEMENS A. (09)
254 Euclid Ave., Hackensack, N. J.
Baloumy, Yazmig Ph. (35)
Norton & Co., Savoy Pharmacy, 34, Kasr El Nil Street, Cairo, Egypt.
Baltzer, H. H. (46)
DBA Desert Hot Springs Drug, 12 S. Palm Dr., Desert Hot Springs, Calif.
Balzer, Virgil W. (45)
Route 2, Box 218, Tucson, Ariz.
Bambach, Karl (48)
6223—30th St., N. W., Washington 15, D. C.
Bamberg, John J. (39)
7159 Wentworth Ave., Chicago, Ill.
Bambrick, Martin J. (45)
152 W. Main St., Girardville, Pa.
Bammann, John (46)
34-04 30th Ave., Astoria, N. Y.
Ban, Sam (47)
5612 Leavenworth St., Omaha 6, Nebr.
Banachowski, Alice E. (45)
1550 Nebraska Ave., Toledo 7, Ohio.
Banaszewski, Theodore D. (47)
9324 VanDyke St., Detroit 13, Mich.
Band, Jacob (46)
406 Lincoln Ave., Rutherford, N. J.
Bandelin, Fred John (44)
c/o Flint-Eaton Co., Main & Franklin Aves., Decatur 60, Ill.
Bander, Leslie C. (47)
2074 Harrison Ave., Bronx 53, N. Y.
Bang, Haakon (40)
1207 Maple St., Pullman, Wash.
Bangert, Henry (47)
1448 Tyrell Ave., Park Ridge, Ill.
Bangert, Howard W. (19)
404 N.-N. W. Highway, Park Ridge, Ill.
Banks, Clarence K. (46)
c/o Research Laboratories, Metal and Thermit Corp., Box 256, Rahway, N. J.
Banks, P. A. (42)
Banks Pharmacy, Riverside, Calif.
Banning, Jennie Morrow (35)
Bradford Hospital, Bradford, Pa.
Bannon, H. J. (38)
Grove Laboratories, Inc., St. Louis, Mo.
Bantner, Gayle B. (48)
6528 S. Harvard Ave., Chicago, Ill.
Banzer, Beatrice S. (43)
9412 Springfield Blvd., Queens Village, N. Y.
Baptist, Maurice J. (46)
Stephens City, Va.
Barail, Louis C. (45)
1415 Park Ave., Hoboken, N. J.
Baranowski, Jane H. (46)
4123 Foster St., Pittsburgh 1, Pa.
Barb, Rodney A. (30)
Barb's Drug Store, Parsons, W. Va.
Barbarini, Fred (49)
Box 36, Bulger, Pa.
Barber, Emmett R. (48)
809—15th St., N. Birmingham, Ala.
Barbieri, Bernard J. (44)
Glenside Station, Fitzwatertown, Pa.
Barbour, Joseph P. (49)
715 Parkview, Dr., Burlington, N. C.
Barch, George F. (47)
524 E. 11th Ave., Tarentum, Pa.
Barch, Richard Leo (46)
16 Garfield St., Natrona, Pa.
Bard, Harold B. (49)
557 Michigan Ave., Evanston, Ill.
Barden, Samuel (46)
236 Euclid Ave., Ridgefield Park, N. J.
BARDFELD, GUSTAVE (30)
209-11 Richland Ave., Flushing, L. I., N. Y.
Bardos, Coleman, Jr. (35)
55 W. 16th St., New York, N. Y.
Barfield, William H. (47)
Weracoba Pharmacy, 1340—13th St., Columbus, Ga.
Barham, C. A. (43)
36 Powell St., Vancouver, B. C., Canada.

Bark, Otto H. (47)
63 Norfolk St., Clarendon Hills, Ill.
Barkau, Fred V. (45)
419 Probasco St., Cincinnati, Ohio.
Barker, McRae D. (46)
2940 Parallel Ave., Kansas City, Kans.
Barkley, James E. (49)
739 N. Dawson St., Uhrichsville, Ohio.
Barkley, Lewis C. (44)
516—7th St., Niagra Falls, N. Y.
Barlement, John P. (39)
2449 Kensington Ave., Philadelphia 25, Pa.
Barletta, Hector (45)
Farmacia Salvadorena, San Pedro Sula, Honduras, C. A.
Barlow, Edward R. (47)
414 S. Ann St., Mobile 19, Ala.
Barlow, Robert J. (46)
354 Nutt Rd., Phoenixville, Pa.
Barnes, Alfa D. (44)
549 Main St., Logan, W. Va.
Barnes, Alfred O. (43)
16625 Estrella Ave., Gardena, Calif.
Barnes, Clifford L. (46)
881 Arnold Way, Campbell, Calif.
Barnes, H. I. (49)
144 South Ave. 54, Los Angeles 42, Calif.
Barnes, Kenneth W. (43)
Poland, Ohio.
Barnes, Leonard J. (45)
1403 N. Strevell Ave., Miles City, Mont.
Barnes, T. Roy (48)
603 S. Boulder, Tulsa, Okla.
Barnes, William J. (47)
Elm St., Middlefield, Ohio.
Barnett, Charlie B. (47)
St. Luke's Hospital, 9th & Boulevard, Jacksonville, Fla.
Barnett, Edward J. (45)
3352 Tennyson St., Washington 15, D. C.
Barnett, John O. (39)
4153 N. 8th St., Philadelphia 40, Pa.
Barnett, Josephine A. (44)
4442 N. Maplewood Ave., Chicago, Ill.
Barnett, Lorena B. (43)
Cowell Memorial Hospital, Berkeley, Calif.
Barnett, Ruth Ella (37)
Allentown Hospital, Allentown, Pa.
Barney, L. D. (47)
Roche Park, Nutley 10, N. J.
Barnum, Florice (46)
626 W. 9th St., Los Angeles 15, Calif.
Barol, Alfred (30)
1911 W. Olney Ave., Philadelphia 41, Pa.
Baron, Bertha (42)
Box 172, Eagle Pass, Tex.
Baron, Joseph Felix (49)
2515 Wadsworth St., Pittsburgh 19, Pa.
Baron, Jules (49)
Chelton & Pulaski Ave., Philadelphia 44, Pa.
BARONE, TONY (23)
271 E. Grand Blvd., Detroit 7, Mich.
Barr, Gracie (44)
848 Second St., Jefferson P. O., New Orleans 20, La.
Barr, Irad J. (43)
Mercy Hospital, Cor. Crawford & Monroe Sts., Vicksberg, Miss.
Barr, Julius P. (42)
119-21 Metropolitan Ave., Kew Gardens 15, N. Y.
Barr, Martin (45)
Ohio State Univ. College of Pharmacy, Columbus, Ohio.
Barrett, Arthur F. (47)
53 Center St., Holyoke, Mass.
Barrett, Leslie Burns (21)
165 Maple St., New Haven, Conn.
Barrett, Thomas J. (46)
25 Linden Ave., Middleton, N. Y.
Barron, Jack (45)
1059 Lakeview, Cleveland 8, Ohio.
Barron, Raymond H. (49)
116 Bullman St., Phillipsburg, N. J.
Barry, Betty J. (46)
1818-A Sutter St., Vallejo, Calif.
Barry, John J. (49)
920 Bridge St., Vernonia, Oreg.

Barry, Joseph A. (43)
The Memorial Hospital, Worcester, Mass.
Barry, Richard H. (46)
226 Carter Blvd., Seymour, Ind.
Barshay, Bernard B. (49)
434 S. 40th St., Philadelphia 43, Pa.
Barta, A. K. (49)
810—18th St., N. W., Washington 6, D. C.
Barth, Warren W. (47)
836 N. St., Apt. 2 Lincoln, Nebr.
Bartha, John A., Jr. (46)
R. F. D. 2, Box 191, Cranbury, N. J.
Barthwell, Jack C., Jr. (46)
214 E. Hancock, Apt. 401, Detroit, Mich.
Barthwell, Sidney (45)
8600 Oakland Ave., Detroit 11, Mich.
Bartlett, John W. (49)
Box 895, Whitefish, Mont.
Bartlett, Maurice J. (46)
23231 Roanoke, Oak Park, Detroit 20, Mich.
Bartlett, Nancy (46)
914—14th St., Denver, Colo.
Bartlett, Shirley M.
347 Bedford St., Lexington, Mass.
Bartley, Earl B. (46)
Box 445, Excelsior Springs, Mo.
Bartolomucci, Dominic L. (43)
c/o Angier Chemical Co., 244 Brighton Ave., Allston, Mass.
Barton, Max F. (47)
1275 Pearl St., Apt. 16, Denver 3, Colo.
Barton, Willard K. (49)
324 Delaware Ave., Albany 2, N. Y.
Barza, S. A. (48)
5531 Western Ave., Montreal 28, Que., Canada.
Basilone, Angelo F. (49)
118 W. Crawford Ave., Connellsville, Pa.
Baskind, Harry G. (46)
12414 Buckeye Rd., Cleveland 20, Ohio.
Bass, James C. (46)
747 N. Congress, Jackson, Miss.
Bass, Joe K. (46)
R. D. 15, Weisgarber Rd., Knoxville, Tenn.
Bass, Joel J. (45)
c/o Quality Drug Store, 2003—18th St. N. W. Washington 9, D. C.
Basset, Joseph F. (46)
3337 Allen St., New Orleans 22, La.
Bassett, Pierre G. (35)
21 Sycamore St., New Bedford, Mass.
Bastian, Carl E. (46)
180 Main St., Dansville, N. Y.
Bastian, Donald E. (47)
1502 McLean Ave., Tomah, Wis.
Bastian, Ernest J. (46)
Box 248, Pittstown, N. J.
Basu, U. P. (40)
153 Dharmatola St., Calcutta, India.
Batcheller, E. Jerome (48)
20 E. Third St., Jamestown, N. Y.
Batchison, Joseph C. (49)
44 Crescent Rd., Greenbelt, Md.
Batease, John C. (47)
7311 Trescott Ave., Takoma Park, Md.
Bates, Harry (44)
Bates Hillsboro Pharmacy, 243 E. Main, Hillsboro, Oreg.
Bates, Lester M. (47)
Irving Drug Co., Alamo, Tenn.
Batie, A. Lester (46)
Laurel, Md.
Batsilas, James (47)
35 Alston St., Somerville, Mass.
Batson, Adin (45)
The Corner Drug Co., Florence, Ala.
Batson, John E. (46)
720 State, Emporia, Kans.
Bauer, Albert J., Jr. (44)
138 W. Jefferson St., Butler, Pa.
Bauer, Charles R. (46)
225 N. Howard St., Akron 4, Ohio.
Bauer, Charles W. (43)
179 Longwood Ave., Boston 15, Mass.
Bauer, Ernest S. (47)
101 Cooper St., New York 34, N. Y.
Bauer, John Conrad (27)
2424 Kentucky Ave., Baltimore, Md.

Bauer, Robert O. (40)
80 E. Concord St., Boston, Mass.
Bauerle, James E. (43)
426 Atwood St., Pittsburgh 13, Pa.
Baum, Leo (48)
1101 Broadway, Oakland 7, Calif.
BAUM, MAURICE ALBERT (20)
3460 W. Eighth, Los Angeles 5, Calif.
Bauman, James A. (25)
76 E. Ridgewood Ave., Ridgewood, N. J.
Baumgarten, Benj. (47)
285 Van Nostrand Ave., Jersey City 5, N. J.
Baumgartner, Frederick J. (47)
594 Bowen St., Oshkosh, Wis.
Bause, Daniel E. (46)
42 E. Phila. Ave., Boyertown, Pa.
Bausher, Richard V. (43)
761 E. Washington St., Allentown, Pa.
Bavly, Ben (41)
2469 Glynn Ct., Detroit 6, Mich.
Bavouset, Russel R. (45)
2107 East Villa, Pasadena 8, Calif.
Baxa, Betty T. (48)
Baxa Young Drug Co., Buckhannon, W. Va.
Baxi, Ravindra G. (49)
331 S. W. Cary Hall, West Lafayette, Ind.
Baxter, Ernest (46)
724 Main St., Rochester, Ind.
Baxter, Orville C. (45)
9 W. Cleveland Dr., Buffalo 21, N. Y.
BAYLIES, HAROLD (26)
3400 Wayne Ave., New York 67, N. Y.
Bayne, Thomas A. (43)
500 N. Washington St., Alexandria, Va.
Baynes, Stephen (48)
222 Wiemer St., Buffalo 6, N. Y.
Bazler, Audrey V. (43)
921 Fairview Ave., Kingsport, Tenn.
BEACH, DEMOTT C. (15)
1 Daisy Place, Tenafly, N. J.
Beach, Geo. W. (42)
1414 Brassie Rd., Flossmoor, Ill.
Beadle, Richard W. (48)
184 W. Main St., Waterbury 11, Conn.
BEAL, GEORGE D. (07)
Mellon Institute, Pittsburgh 13, Pa.
Beals, Ernest L. (39)
28 Hollywood Ave., Tuckahoe, N. Y.
Beames, Reginald F. (49)
161—24th St., Ogden, Utah
Beamont, Gerald S. (47)
232 Buttles, Columbus 8, Ohio.
Bean, Earl O. (44)
Orchard Drugstore, 3059 W. Bancroft, Toledo 6, Ohio.
Beard, Emmett H. (46)
Rohlf Memorial Clinic, Waverly, Iowa.
Beard, Henry W. (47)
581 Sawyer St., San Francisco 24, Calif.
Beatty, John F. (46)
96 Galen St., Waltham 54, Mass.
Beatty, John S. (44)
3262 Werk Rd., Cincinnati 11, Ohio.
Beatty, Maxine (47)
1505 31st St., Des Moines 11, Iowa.
Beatty, Patrick J. (43)
17 Crescent St., Waltham, Mass.
Beaujon, Jan H. R. (47)
Dormitory B. Rm. 302, Univ. of North Carolina, Chapel Hill, N. C.
Beavers, Agnes O. (44)
1930 S. Primrose, Alhambra, Calif.
Beavis, Donald (45)
502 S. Westlake Ave., Los Angeles 5, Calif.
Beavo, Mabel S. (18)
4111 Springfield Ave., Chicago 18, Ill.
Bebarfald, Robert (47)
115 E. 96th St., New York 28, N. Y.
Beck, Allen V. R. (43)
715 E. 50th St., Indianapolis, Ind.
Beck, Francis J. (46)
789 Copley Rd., Akron 3, Ohio.
Beck, Herbert J. (48)
2624 Jaynes St., Omaha, Nebr.
Beck, John L. (43)
4704 Burnet Rd., Austin 22, Texas.
Beck, Joseph S. (46)
253 Beale St., Wollaston 70, Mass.
Beck, Norbert E. (47)
8728 W. North Ave., Wauwatosa 13, Wis.
Beck, William F. (45)
2814 Michigan Ave., Niagara Falls, N. Y.
Becker, Andrew J. (47)
3200 N. 60th St., Milwaukee 5, Wis.
Becker, Bernard (43)
4744 N. Western Ave., Chicago Ill.
Becker, Carl J. (49)
25 Fifth Ave., N., St. Cloud, Minn.
Becker, Charles H. (38)
Univ. of Florida, School of Pharmacy, Gainesville, Fla.
Becker, David (46)
655 McLean Ave., Yonkers 5, N. Y.
Becker, George (46)
530—2nd St., Brooklyn, N. Y.
Becker, Harold E. (24)
25 Columbia Heights, Brooklyn, N. Y.
Becker, Herman E. (46)
800 N. Sheppard St., Apt. 10, Richmond 21, Va.
Becker, Leo (48)
11750 N. Martindale, Detroit 4, Mich.
Becker, Morris M. (45)
1544 E. 53rd St., Chicago 15, Ill.
Becker, Sol. H. (47)
4313 W. Market St., Louisville 12, Ky.
Beckerman, J. H. (38)
654 Osborn St., Brooklyn 12, N. Y.
Beckers, Michael C. (45)
621 Main St., Rapid City 4, S. Dak.
Beckley, John Henry (44)
163 Varick St., New York 13, N. Y.
Beckman, Gloria Mary (46)
1441 Park Ave., Jasper, Ind.
Bednarski, Henry A. (47)
2638 W. Lincoln Ave., Milwaukee 7, Wis.
Bednarz, Julius F. (46)
2034 Union Rd. Gardenville, N. Y.
Beedle, Willa R. (46)
Box 233, Elrama, Pa.
Beeler, Emerson C. (40)
826 Windermere Ave., Drexel Hill, Pa.
Beemer, Lloyd A. (47)
5043 Courville Ave., Detroit 24, Mich.
Bees, M. Charles (49)
1002 N. Mercer St., New Castle, Pa.
Beesley, Eugene N. (42)
Eli Lilly & Co., Indianapolis, Ind.
Behar, Joseph (48)
9001-31st Ave., Jackson Heights, N. Y.
Behl, Elmer R. (46)
2924 N. 49th St., Milwaukee 10, Wis.
Behne, Hildegard A. (45)
156 N. Las Palmas, Los Angeles 4, Calif.
Beighley, S. R. (30)
Vanderbilt, Pa.
Beil, Walter P. (44)
29 Williamson Ave., Youngstown, Ohio.
Beisele, J. Philip (35)
521 Broad Ave., Palisade Park, N. J.
Beiter, Paul C. (46)
107 W. Main St., Lancaster, Ohio.
Beitler, Ben (47)
4003 Wabash Ave., Apt. 1B, Baltimore 15, Md.
Bekampis, Orest G. (49)
2268 Hillcrest Ave., Pennsauken, N. J.
Belair, Joseph F. (47)
2222 E. 5th St., Superior, Wis.
Belcastro, Patrick F. (46)
711 Meridian, West Lafayette, Ind.
Belford, Julius (44)
Dept. of Phys. & Pharmacology, Long Island Coll. Med., 350 Henry St., Brooklyn 2, N. Y.
Bell, Alexander F. (45)
1336 Oak St., N. W., Washington 10, D. C.
Bell, Alexander M. Jr. (43)
134 B—Boyden Ave., Maplewood, N. J.
Bell, Arthur E. (42)
319 W. Valley Blvd., El Monte, Calif.
Bell, C. W. (41)
293 S. Centre St., Orange, N. J.
Bell, Edna (46)
208 Sherman, Joliet, Ill.
Bell, Frederick K. (41)
4404 Ethland Ave., Baltimore 7, Md.
Bell, Kenneth C. (47)
2227 7th St., Cuyahoga Falls, Ohio.
Bell, Peter F. (49)
Los Alamos Hospital, Los Alamos, N. Mex.
Bell, Philip (47)
296 Broadway, Passaic, N. J.
Bell, Saul A. (38)
851 Carroll St., Brooklyn 15, N. Y.
Bell, William S. (48)
Woodland Trailer Pk., Cincinnati 24, Ohio.
Bellafiore, Ignatius J. (40)
49 Van Sicklen St., Brooklyn 23, N. Y.
Belleau, Louis S. (46)
700 S. Broadway, Green Bay, Wis.
Bellemore, Fred C. (42)
5825 Mt. Elliott, Detroit 11, Mich.
Bellessa, Louis (48)
314 W. 4th, Cle Elum, Wash.
Bellinger, Bernard (48)
2031 Kingsway, New Westminster, B. C., Canada.
Bellis, Billy N. (47)
116 N. Broadway, Santa Maria, Calif.
Bellis, Edgar S. (39)
116 Poudfield Rd., Bronxville, N. Y.
Bellis, Henry A. (47)
Botica Boie, 95 Escolta St., Manila, P. I.
Bellows, Marvin (46)
322 Beach 74 St., Arverne, N. Y.
Beloate, Robert E. (49)
1478 S. Trezevant, Memphis 11, Tenn.
Belscamper, Harland (44)
Route 1, Glenmorrie Dr., Oswego, Ore.
Belz, Richard E. (48)
1859 Portsmouth Way, Union, N. J.
Belzer, Morton (44)
1509—39th Ave., Oakland 1, Calif.
Belzner, Harold W. (46)
Cor. Bedford & Haynes, Johnstown, Pa.
Bemis, Edward O. (46)
72 Howard St., Rockland, Mass.
Benda, Joseph (48)
7400 W. Irving Pk., Chicago 34, Ill.
Bender, George A. (28)
c/o Advertising Dept., Parke, Davis & Co., Detroit 32, Mich.
Bender, Maurice (44)
Eastern Regional Res. Lab. USDA, Mermaid Lane & Ardmore Ave., Philadelphia 18, Pa.
Bender, Milton (49)
15324 Clifton Blvd., No. 205, Lakewood 7, Ohio.
Bendon, Lucille (45)
827—6th Ave., Council Bluffs, Iowa.
Benen, Doris F. (49)
130 S. 60th St., Philadelphia 39, Pa.
Benet, Jonas J. (40)
714 Vine St., Cincinnati, Ohio.
Benfer, Eugene L. (49)
1045 W. Kings Hwy., San Antonio, Tex.
Bengert, Robert J. (47)
Malta, Mont.
Benica, William S. (43)
Med. Coll. of Va., Sch. of Pharmacy, 12th & Clay Sts., Richmond 19, Va.
Benishin, Enuphry (47)
V. A. Center, Box 801, Bath, N. Y.
Benjamin, A. (49)
4001 Prairie Ave., Miami Beach, Fla.
Benjamin, Bernard (47)
2734 Hampshire, Apt. 202, Cleveland Heights, 18, Ohio.
Benjamin, Gloria (49)
4040 Alum Rock Ave., San Jose 12, Calif.
Benjamin, Jesse P. (49)
6th Med. Gen. Disp., A. P.O. 407-A, c/o P.M., New York, N. Y.

Benka, William B. (47)
6133 W. Washington Blvd., Wauwatosa 13, Wis.
Bennawy, Mildred L. (46)
13201 Strathmoore Ave., Detroit, Mich.
Bennett, Elmer W. (29)
c/o P. J. Noyes Co., Lancaster, N. H.
Bennett, Howard G. (46)
Box 174, Wasco, Calif.
Bennett, James A. (48)
2727 Menlo Ave., Los Angeles 7, Calif.
Bennett, Marianne C. (49)
3643 Raymont Blvd., Cleveland 18, Ohio.
Bennett, Marshall E. (49)
907 Stockbridge Ave., Kalamazoo, Mich.
Bennett, Mary R. (46)
224 Wilton Dr., Decatur, Ga.
Bennett, Rutherford A. (46)
321 West 138 St., New York 30, N. Y.
Bennett, Shirley Mae (45)
Pleasant St., Chester, Conn.
Bennett, Vernon (45)
1618 N. Marion, Oklahoma City 7, Okla.
Bennett, Victor M. (48)
Dept. of Pharm., Coll. of Ozarks Clarksville, Ark.
Benson, Alfred J. (47)
14 S. Broadway, Scottdale, Pa.
Benson, Cecil G. (46)
P. O. Box 205A, LaFontaine, Ind.
Benson, George E., Jr. (46)
712—19th Ave. N., Seattle 2, Wash.
Benson, Gladys K. (47)
P. O. Box 635, Martinsburg, W. Va.
Benson, Merlin G. (47)
Gen. Del., La Junta, Colo.
Benson, Robert L. (49)
R. F. D.#4, Columbia, S. C.
Benson, Simon (45)
7423 Woodrow Wilson, Detroit 6, Mich.
Benson, Wilbur M. (41)
The California Hospital, 1414 S. Hope St., Los Angeles 15, Calif.
Bentler, Louis A. (49)
442 Briar Pl., Chicago, Ill.
Benton, Byrl E. (42)
Drake Univ., Coll. of Pharmacy, Des Moines 11, Iowa.
Benton, William H. (49)
2325 Brookside Dr., Flint 3, Mich.
Beran, Robert C. (49)
135 Lincoln Ave., Pittsburgh 9, Pa.
Berardi, Louis (48)
1227 Smithwood Dr., Los Angeles 35, Calif.
Berckenhoff, Edward F. (49)
605 E. 2nd, Hallettsville, Tex.
Beretta, Fred P. (41)
2900 College Ave., Berkeley 5, Calif.
BERG, FRANTZ FREDERICK (14)
108 Aspen St., Floral Park, N. Y.
Berg, Gunter A. (49)
17 Hampton St., Albany, N. Y.
Berg, J. B. (46)
Mondovi, Wis.
Berg, Milton J. (43)
1228 Caledonia St., LaCrosse, Wis.
Berg, Walter R. (45)
Berg Pharmacy, 98 Fountain St., Providence 3, R. I.
Berger, Calvin (37)
297 King St., Chappaqua, N. Y.
Berger, Herman S. (46)
10 Park Terrace East, New York 34, N. Y.
Berger, Joseph D. (48)
2946 Sturtevant Ave., Detroit 6, Mich.
Berger, Leonard (45)
817 E. 175 St., New York 60, N. Y.
Berger, Martin (46)
136 N. Burlington Ave., Los Angeles 26, Calif.
Berger, Melvin L. (47)
6540 Minerva St., Chicago 37, Ill.
Bergeron, Charles A. (43)
38 Rue St., Jean Baptiste, Montmagny, P. Q., Canada.
Berggren, Clifton P. (46)
Box 1874, Anchorage, Alaska.
Bergh, Harvey W. (48)
Kenyon, Minn.
Bergman, Abe (47)
780 Broadway, Bayonne, N. J.
Bergman, David (47)
175 Elizabeth Ave., Newark 8, N. J.
Bergman, Lillian C. (47)
135—23rd Ave., San Francisco, Calif.
Bergner, Mary L. (45)
1715 Riggs Place, N. W., Washington, D. C.
Bergstein, Leonard (46)
311 E. Main St., Midland, Mich.
Bergstrom, J. N. (46)
438 Wheeling Way, Los Angeles 42, Calif.
Bergstrom, Robert (49)
821 Indiana, Coeur d'Alene, Idaho.
Bergy, Gordon Alger (17)
317 Lebonon St., Morgantown, W. Va.
Berkley, Nathaniel (46)
West Chateau, Woodmere, N. Y.
Berkowich, Melvin I. (46)
25 S. Third St., Oxford, Pa.
Berkowitz, Alfred E. (38)
c/o Michigan Bag and Banel Co., 4825 Russell St., Detroit 7, Mich.
Berkowitz, Bernard (46)
128 Ave. N., Brooklyn 30, N. Y.
Berkowitz, Marvin (46)
161 Throop Ave., Brooklyn 6, N. Y.
Berkowitz, Morris Emanuel (45)
314 E. Virginia St., Tallahassee, Fla.
Berlener, Clarence (44)
Hermann, Mo.
Berman, Alex (45)
114 Bellevue Ct., Madison 5, Wis.
Berman, Arthur K. (48)
3407 Harrison, Corvallis, Ore.
Berman, Frederic T. (49)
3407 Hamilton Ave., Baltimore 14, Md.
Berman, Milton A. (49)
1809 Hartman, Louisville, Ky.
Bernanke, Jonas (49)
1003 E. Harrison St., Dillon, S. C.
Bernardini, Rinato J. (47)
c/o Phillobey, Ottawa, Ill.
Berner, Bernard (46)
7840 68th Ave., Middle Village, New York, N. Y.
Bernfeld, William (46)
P. O. Box 214, Highland Pk. Substation, Los Angeles 42, Calif.
Bernhart, Petter K. (47)
Box 259, Sioux Falls, S. Dak.
Bernstein, Harris B. (49)
2517 S. Fairhill St., Philadelphia, 48, Pa.
Bernstein, Stanton (47)
455 Market St., Paterson 3, N. J.
Berntsen, Emerson F. (48)
664 Musser Ct., Salt Lake City, Utah.
Berow, Edward (48)
305 Illinois Ave., Peoria 4, Ill.
Berquist, Herbert C. (46)
437 Greenway Dr., Beaverton, Oreg.
Berry, Allen D. (45)
214-216 Second Ave., N., Nashville 1, Tenn.
Berry, Floyd C. (45)
2729 Colby, Everett, Wash.
Berry, Milton J. (49)
11 East Main St., Mystic, Conn.
Berry, Philip (46)
524 Bch 67th St., Arverne, New York, N. Y.
Berry, R. Ray (49)
4469 Rosemary Parkway, Columbus 2, Ohio.
Berry, Robert K. (46)
421 E. 33rd St., Indianapolis 5, Ind.
Berry, Rodney C. (45)
Dept. of Agriculture, 1123 State Office Bldg., Richmond 19, Va.
Berryhill, Robert H. (46)
824 E. 30th St., Austin, Tex.
Berryman, John N. O. (47)
Elvins, Mo.
Bersani, Camilla (49)
5752 Manistique, Detroit 24, Mich.
Bershader, Copeland (49)
380 S. 4th St., Brooklyn 11, N. Y.
Bertram, Emil O. (46)
564 Hawthorne Ave., Grosse Point Woods 30, Mich.
Besancon, Robert M.* (39)
Univ. of Illinois, 808 S. Wood St., Chicago 12, Ill.*
Beskid, Charles J. (47)
402 Champlain, Hamlet, N. C.
Beskind, Sidney (49)
P. O. Box 4661, Miami, Fla.
Besoyan, R. M. (48)
693 Post St., San Francisco 9, Calif.
Besser, Henry A. (49)
5102 Main St., Downers Grove, Ill.
Best, Frank Merrell (14)
1007 N. 9th St., Lafayette, Ind.
Best, Samuel M. (31)
129 Medford St., Malden, Mass.
Besta, Theodore J. (47)
3200 W. Cermak Rd., Chicago 23, Ill.
Betensky, Nathan (47)
642—33rd St., Des Moines 12, Iowa
Betts, Loel Howard (47)
269 S. Warwick, St. Paul 5, Minn.
Betts, M. Bernetta (48)
82 Winter St., Gardiner, Maine.
Betts, Merle P. (47)
5402 W. Vliet St., Milwaukee 8, Wis.
Betzel, Irwin L. (44)
Box 385, Eugene, Oreg.
Betzing, Robert W. (47)
8090 Long Island Dr., Fair Haven, Mich.
Beukma, William (13)
1018 Bannock, Denver 4, Colo.
Bevacqua, Alfred (48)
310 Newark Ave., Jersey City 2, N. J.
Beyer, Charles H. (48)
4121 Lora Ave., Cincinnati 11, Ohio.
Beyer, John (49)
421 Arlington Ave., East McKeesport, Pa.
Beyer, Joseph A. (46)
1217 Island Ave., McKees Rocks, Pa.
Beyer, Robert O. (47)
165 Liberty St., Plymouth, Mich.
Beyer, Roy R. (49)
6008 Del Mar, Mission, Kans.
Bialek, Samuel M. (47)
3117 Queens Chapel Rd., Mount Rainier, Md.
BIALK, BERNARD A. (38)
Box 570, Route 8, Tucson, Ariz.
Bianca, Vincent C., Jr. (48)
1309 Jackson St., Scranton 4, Pa.
Bianculli, Italo A. (46)
7231 Lawton St., Pittsburgh 6, Pa.
Bianculli, Joseph A. (46)
443 S. Braddock Ave., Pittsburgh 21, Pa.
Bianculli, Thomas A. (46)
1407 Grotto St., Pittsburgh 6, Pa.
Bias, Charles D. (47)
Box 31, Keystone, W. Va.
Biasi, Edward C. (46)
217 N. Main St., Bloomington, Ill.
Bibb, W. Corrie (39)
327 Sheridan Pl., Lake Bluff, Ill.
Bibb, Wade M. (49)
Munford, Tenn.
BIBBINS, F. E. (09)
150 W. 64th St., Indianapolis, Ind.
Biber, Irving (46)
463 Lenox Ave., South Orange, N. J.
Bickford, Charles F. (47)
c/o Hotel St. George, Brooklyn 2, N. Y.
Bickmann, Shirley (46)
4663 Lafaye St., New Orleans 17, La.
Bickmore, Ellen J. (48)
Blaine Hall #109, Univ. of Washington, Seattle 5, Wash.
Bieber, Homer L. Jr. (49)
1418 Scott St., Williamsport 22, Pa.
Biedermann, Theodore (47)
2100 N. Palmer St., Milwaukee 12, Wis.
Bienfang, R. D. (30)
School of Pharmacy, Norman, Okla.
Bienvenu, R. J. (46)
2320 Elliott St., Alexandria, La.
Bier, Walter Clifton (44)
318 E. 6th St., Crowley, La.
Bierer, John M. (49)
1 N. Main, Lexington, Va.
Biermacher, Ursula (47)
2 Scott Circle, Washington 6, D. C.
Bigby, George F. (40)
118 E. Benson St., Anderson, S. C.
Bigelow, Carle M. (35)
c/o The Calco Chemical Co., Bound Brook, N. J.
Bigham, Harral A. (46)
Box C, Bigham Drug Co., Paducah, Tex.

Bigman, Alex (49)
2417 Woodstock Ave., Swissvale 18, Pa.
Bihn, Francis L. (32)
2706 W. 11th St., Cleveland 13, Ohio.
Bilhuber, E. A. (24)
377 Crane St., Orange, N. J.
Billeisen, Howard W. (46)
1227 N. Illinois St., Indianapolis 2, Ind.
Billups, Charles H. (49)
1631 Central Ave., East St. Louis, Ill.
Bilogan, Joseph (45)
20 Ampere Pkwy., East Orange, N. J.
Bilogan, Natalie Irene (45)
32 Ampere Pkwy., East Orange, N. J.
Bilotti, Nicola U. (44)
84 Union Ave., Providence, R. I.
Binday, Morris L. (46)
723 Fulton Ave., Hempstead, N. Y.
Binder, Franklin T. (44)
720 Locust St., Des Moines 9, Iowa
Bindley, J. B., Jr. (44)
121-3-5 N. 5th St., Terre Haute, Ind.
Binnion, Jack Jr. (48)
926 Orchard St., Newport, Ky.
Bird, Harry F. (46)
1412 Second Ave., Elmwood, York, Pa.
Bird, John C. (32)
80 Woodland Dr., Pleasantville, N. Y.
Birenbaum, Leon M. (47)
7552 Melrose, University City 14, Mo.
Birmingham, Joseph E. (45)
Regional Office, 211 W. Campbell Ave., Roanoke 11, Va.
Birmingham, Robt. J. (42)
25 W. Babbitt, Dayton 5, Ohio.
Birnbaum, Florenz S. (43)
50-54—186th St., Flushing, N. Y.
Birr, Herman E. (46)
Apt. 142, S. Sy Quia Apts., 1151 M. H. del Pelar, Manilla, P. I.
Bischak, Theodore (48)
254 Orchard St., East Paterson, N. J.
Bishop, E. Roberta (49)
502 College Blvd., Morehead, Ky.
Bishop, John R. (46)
319 Oxford Ave., Akron, Ohio.
Bishop, Marion M. (46)
Amsterdam, Ohio.
Bishop, Stanley (47)
392 California Ave., Palo Alto, Calif.
Bissett, George K. (48)
69 Main St., Sayreville, N. J.
Bissette, Paul B. (41)
417-19 E. Barnes St., Wilson, N. C.
Bisson, Mr. Jean C. (48)
52 St. Mathias, Quebec, Canada.
Bitten, T. H. (43)
66 Queensberry St., S., #319, Boston, Mass.
Bittikofer, Robert B. (49)
1527 Jermain Dr., Toledo 6, Ohio
Bittner, Albert H. (46)
Erie St., Linesville, Pa.
Bittner, A. O. (47)
916 S. Lincoln, Aberdeen, S. Dak.
Bjarner, Christian (49)
P. O. Box 1292, Guayaquil, Ecuador, S. A.
Bjerke, Paul G. (45)
323 Garfield Ave., Eau Claire, Wis.
Bjerklie, Elvin A. (46)
Gilby, N. Dak.
Black, Frank L. (25)
1030 N. Charles St., Baltimore, Md.
Black, James D. (49)
219 W. Highland Ave., Ada, Ohio
Black, Walter D. (46)
113 Victory Ave., Pittsburgh, Calif.
Blackburn, Arthur B. Jr. (49)
404 Main St., Latrobe, Pa.
Blackman, Charles (48)
20 Pierpont St., Brooklyn 2, N. Y.
Blackman, Stanley (41)
443 Broadway, New York, N. Y.
Blackwell, Stephen E. (49)
Danielsville, Ga.
Blair, Frances I. (46)
School of Pharm., Univ. of Kansas, Lawrence, Kans.
Blair, William R. (45)
311 Main St., Great Barrington, Mass.
Blaisdell, Robert J. (48)
1505 N. Everest, Oklahoma City, Okla.
Blake, Cathleen Anne (44)
3483—17th St., San Francisco, Calif.
Blake, Leslie L. (47)
c/o Blake's Pharmacy, Williamson, N. Y.
Blake, Lynn Stanford (14)
302 E. Magnolia Ave., Auburn, Ala.
Blake, Ruth A. (47)
118 W. Third St., Apt. 3, Beaver Dam, Wis.
BLAKELEY, GEORGE CLARENCE (92)
313 E. Second St., The Dalles, Oreg.
Blakeway, James G. (46)
1504 S. Meadowbrook, Garland, Tex.
Blakeway, Ralph W. (47)
3559 East Blvd., Cleveland 5, Ohio.
Blanc, Felix (47)
State Capitol, Rm. 418, Hartford, Conn.
Blanchard, Roger A. (47)
Pere Marquette Bldg., New Orleans 12, La.
Bland, Fred V. (46)
3009 Jerome St., Madison, Wis.
Bland, James A. (49)
120 Main St., La Grange, Ga.
Blandford, Joseph H. Jr. (49)
1604 Shady Lane, Louisville, Ky.
Blank, Mark E. (49)
605 Independence Dr., Clairton, Pa.
Blann, Viola H. (46)
400 Greenbay Rd., Kenilworth, Ill.
Blasingame, Walter A. (46)
209 Fifth Ave., S. W., Moultrie, Ga.
Blasingame, William G. Jr. (49)
33 Evans Dr., Savannah, Ga.
Blaszak, Martin P. (47)
2947 N. Mason Ave., Chicago 34, Ill.
Blatchley, William C. (43)
8906 Puritan, Detroit, Mich.
Blatt, David B. (38)
1725 Morris Ave., New York 57, N. Y.
Blatter, William A. (49)
314 S. 12th, Lincoln, Nebr.
Blauw, J. Max (47)
700 S. Goodman St., Rochester 7, N. Y.
Blazek, Zdenek (47)
29 Jecna, Prague II, Czechoslovakia.
Blazier, Maurice F. (45)
Fontenelle Apts. #5, Scottsbluff, Nebr.
Bleicher, Leo (43)
4052 N. Monticello Ave., Chicago, Ill.
Bleser, Karl E. (46)
222 S. Main, Milbank, S. Dak.
Blessing, Conrad J. (48)
Box 127, Corfu, N. Y.
BLETCHER, HENRY ERNEST JOHN (04)
152 Lenore St., Winnipeg, Manitoba, Canada.
Blicke, Frederick F. (27)
2201 Melrose Ave., Ann Arbor, Mich.
Blid, Harold F. (45)
517 Locust St., McKeesport, Pa.
Blier, Samuel (45)
557 E. 93rd St., Brooklyn 12, N. Y.
Blinderman, Martin (46)
169 Lewis Ave., Brooklyn 21, N. Y.
Bliss, Robert C., (40)
Att: John H. Hollowell 320 S. State St., Ann Arbor, Mich.
Bliven, Charles W. (41)
812 Heron Dr., Silver Spring, Md.
Bloch, Fred (45)
Hotel Governor, 180 Turk St., San Francisco 2, Calif.
Bloch, Henry (47)
4 Rutgers Pl., Passaic, N. J.
Bloch, Jacob M. (37)
24 Broadway, Rockville Centre, N. Y.
Bloch, Paul (49)
5040 Dickerson, Detroit 13, Mich.
Block, Frank (48)
4007 Liberty Heights Ave., Baltimore 7, Md.
Block, Jacob M. (42)
77—13th Ave., Newark 3, N. J.
Block, Samuel (49)
2901 E. Baltimore St., Baltimore 24, Md.
Bloedle, Claude H. (48)
5400 Sandpoint Way, Seattle Wash.
Blomberg, Robert C. (48)
Hamline & Iowa, St. Paul, Minn.
Blome, Walter H. (27)
Route 1, Manchester, Mich.
Blomquist, Arthur T. (45)
250 N. Ottawa St., Joliet, Ill.
Bloom, Cecil R. (46)
11 S. Second St., Clearfield, Pa.
Bloomberg, Harold C. (49)
1215 S. Broad St., Trenton 10, N. J.
Bloomfield, Russell (46)
4415 Cromwell Ave., Los Angeles 27, Calif.
Bloss, Jeanne I. (48)
1086 Alder Ave., Moose Jaw, Sask., Canada.
Blosser, Bart F. (48)
P. O. Box 572, Lima, Ohio
Blosser, Nolon H. (45)
5917 Marlborough Ave., Detroit 24, Mich.
Blount, Betty J. (49)
5 Cornwall St., Alexandria Bay, N. Y.
Blower, James A. (46)
1636 S. 7th St., Terre Haute, Ind.
Bloxton, Francis E. (47)
Rockbridge Baths, Va.
Bludworth, E. E. (49)
P. O. Box 30, Fort Pierce, Fla.
Blue, Jerome J. (49)
309 Montezuma St., Hancock, Mich.
BLUMENSCHEIN, FREDERICK J. (04)
7 Pittsburgh St., Uniontown, Pa.
Blumenthal, Armin (45)
P. O. Box 9268, Johannesburg South Africa.
Blundon, William J. (47)
6931 Reynolds St., Pittsburgh 8, Pa.
Blynn, S. Jerry (45)
1280 E. 12th St., Brooklyn, N. Y.
BLYTHE, RUDOLPH H. (32)
502 Valley Rd., Upper Darby, Pa.
Boake, Felix John (46)
653 Morewood Ave., Pittsburgh 13, Pa.
Boas, Auguste (28)
Shoreham Hotel, Washington, D.C.
Bobel, John M. (48)
2351—32nd St., Astoria, L.I. 5, N. Y.
Bobst, E. Walton (34)
c/o Wm. R. Warner Co. Inc., 113 W. 18th St., New York 11, N. Y.
Boccio, John J. (46)
1421 N. Fairfield Ave., Chicago 22, Ill.
Bock, H. Duke (49)
Lone Rock, Wis.
Bode, Joseph G., Jr. (46)
120 French St., New Brunswick, N. J.
Bodine, Felton O. (46)
334 Johnson St., Decatur, Ala.
Bodt, George W. (47)
3796 Burlingame, Linwood Sta., Detroit 6, Mich.
Bödvarsdóttir, Ingibjörg (46)
Reykjavikur Apotek, Reykjavik, Iceland.
Boegly, William J. (44)
R. F. D. 1, East Greenbush, N. Y.
Boehm, Fred E. (49)
Route 9, Box 903, Tacoma, Wash.
Boenigk, John W. (46)
Univ. of Texas, Coll. of Pharmacy, Austin, Tex.
Boffa, Philip J. (47)
3359 W. Chicago Ave., Chicago 51, Ill.
Bogan, Buell P. (34)
1726—8th Ave., Apt. 9, Greeley, Colo.
Bogarosh, Peter L. (47)
Univ. of Buffalo, School of Pharmacy, Buffalo 14, N. Y.
Bogart, F. M. (44)
c/o Pharmacy The Baroness Erlanger Hospital, Chattanooga, Tenn.
Bogart, Kenneth S. (46)
5437 Kenwood, Indianapolis, Ind.
Bogash, Hyman C. (43)
2017 Spring Garden St., Philadelphia, Pa.
Bogdanowicz, Connie (48)
194 Cherry St., Milford, Conn.

Bogdanski, Chester J. (47)
2378 N. Humboldt Ave., Milwaukee 12, Wis.
Bogert, Marston T. (25)
1158 Fifth Ave., Apt. 14B, New York 29, N. Y.
Boggs, H. R. (46)
Beers St., Keyport, N. J.
Boggs, John L. (48)
138 W. Union St., Circleville, Ohio.
Boggs, Wendell A. (41)
36 W. Plain St., Cochituate, Mass.
Bogner, Franz (37)
15 Garden Turn, Manhasset, L. I., N. Y.
Bogner, Robert L. (46)
1324 Lebanon Ave., Belleville, Ill.
Bohe, John F. (46)
3341 High St., Denver 5, Colo.
Bohlman, Vilas A. (47)
c/o Bohlman Drug Store, 1028 Wisconsin Ave., Boscobel, Wis.
Bohn, Herbert, (28)
c/o Columbia Club, Indianapolis 9, Ind.
Bohnsack, Earl (43)
Mayville Pkwy., Mayville, N. Dak.
Bohrer, Edwin W. (44)
1078 Oakwood, Toledo, Ohio
Bohrman, Fred (45)
53 Schaefer Maplewood, N. J.
Boix-Vallicrossa, A. (45)
Lisboa #14, Dep. 10, Mexico, D. F.
Bolan, Lawrence (44)
22 Dennis St., Gardiner, Maine
Boles, Manfred J. (46)
882 E. California St., Pasadena 5, Calif.
Boller, Gerald (44)
Faulkton, S. Dak.
Bolles, Geo. E. (37)
242 Main St., Danbury, Conn.
Bollig, Frank M. (46)
3rd & Fremont, Las Vegas, Nev.
Bollinger, Albert L. (40)
2916 Frankfort Ave., Louisville, Ky.
Bollschweiler, Marjorie M. (43)
P. O. Box 154, State College, N. Mex.
Bolos, Nicholas G. (48)
155 Maple St., Manchester, N. H.
Bonagura, George (45)
326 Locust St., Teaneck, N. J.
Bonaparte, Haigaz K. (43)
6331 Hollywood Blvd., Los Angeles, Calif.
Bond, Albert F. (45)
9 Piedmont, Clendenin, W. Va.
Bond, Less (46)
106 W. Main, Dundee, Ill.
Bondarchuk, Michael A. (46)
136 Sixth St., Freeland, Mich.
Bone, Charles E. (47)
2073—7th Ave., Sacramento 18, Calif.
Bone, Jack N. (46)
1912 Fairview Rd., Laramie, Wyo.
Bonelli, David A. (47)
443 Connecticut St., San Francisco 10, Calif.
Bonem, Fred A. (48)
1740 High St., Denver 6, Colo.
Bonerbo, Vincent J. (43)
635 E. 228th St., Bronx 66, N. Y.
Bonesteel, Herbert P. (49)
81 Pine Brook Dr., Larchmont, N. Y.
Bongiovanni, Michael (42)
532 Adam, Hoboken, N. J.
Bonham, L. Leonard (48)
5026 Hastings Rd., San Diego 4, Calif.
Bonilla, Alphonso (48)
5150 Fruitridge Rd., Sacramento 17, Calif.
Bonin, Victor H. (48)
182 E. 93rd St., Brooklyn 12, N. Y.
Bonkowski, Vincent (39)
5623 Michigan Ave., Detroit 10, Mich.
Bonney, Luckey L. (45)
499 S. Taylor Coquille, Oreg.
Bono, F. N. (44)
Jefferson Davis Hosp., 1801 Buffalo Dr., Houston 3, Tex.
Bonow, Eunice R. (45)
623 West State St., Milwaukee 3, Wis.
Bonvicino, Alfred (26)
118-08—223rd St., Cambria Heights 11, L. I., N. Y.
Bookatz, Donald P. (48)
2599 Laurelhurst Dr., University Heights 18, Ohio.

Bools, William K. (47)
2114 Madison Rd., Cincinnati 8, Ohio.
Boone, D. L. (44)
100 W. Parrish, Durham, N. C.
Boonin, Albert E. (48)
5971 Chester Ave., Philadelphia 43, Pa.
Boonin, Samuel (45)
441 E. Township Line, Elkins Park 17, Pa.
Booth, Glenn F. (48)
509½ W. Boston Ave., Youngstown 9, Ohio.
Booth, James D. (49)
8024 N. E. 2nd Ave., Miami 38, Fla.
Booth, L. P. (49)
Hayesville, N. C.
Boothby, Sterl K. (48)
c/o McClard's Drug, Grass Valley, Calif.
Boothe, James (44)
Lederle Laboratories, Pearl River, N. Y.
Bope, Charles E. (41)
Thornville, Ohio.
Bope, Frank W. (44)
College of Pharmacy, Ohio State Univ., Columbus 10, Ohio.
Bopf, A. P. (39)
1135-53 Elizabeth Ave., W., Linden, N. J
Borcherdt, Frederick H. (43)
217 N. Wolcott Ave., Chicago 12, Ill.
Borden, Fred L. (46)
163 Seltzer St., Crestline, Ohio.
Borders, Glenwood (46)
717 Matadero Ave., Palo Alto, Calif.
Borgfeldt, Arnold G. (49)
2400—8th Ave., Sacramento, Calif.
Borghi, Joseph, Jr. (49)
414—12th St., Union City, N. J.
Borgstrom, Carl A. (43)
964 Payne Ave., St. Paul, Minn.
Borneman, John A. (45)
248 N. 15th St., Philadelphia, Pa.
Borover, Irwin (47)
11315 Durant Ave., Cleveland 8, Ohio.
Borriello, Marion Edna (44)
1328 Broad St., Meriden, Conn.
Borschover, Emanuel (28)
268 Goldsmith Ave., Newark 8, N. J.
Bortman, David R. (49)
35 Washington St., Dorchester 21, Mass.
BORUCKI, EDWARD A. F. (20)
7743 Burnham Ave., Chicago 49, Ill.
Bosche, George (49)
7208 Natural Bridge Rd., St. Louis 21, Mo.
Bosee, Roland A. (46)
Physiological Test Sec., Naval Aviation Test Center, Patuxent River, Md.
Bosley, John O. (47)
1401 King St., Wilmington 33, Del.
Bosserman, Charles E. (18)
Newport, Pa.
Bosso, Angelo (48)
4260 Mission St., San Francisco 12, Calif.
Boswell, Charles L. (46)
338 S. 20th St., Terre Haute, Ind.
BOTS, L. E. (16)
c/o Mrs. Olin Snyder, Med. Serv. Corps, U.S. Navy Ret., Witt, Ill.
Botnick, Nathan (48)
1367 E. 17th St., Brooklyn 30, N. Y.
Bottecelli, Paul (43)
104 Adelaide, St., Fenton, Mich.
Botwin, Sam (48)
54 Carton St., Rumson, N. J.
Boucher, Frederick D. (49)
129 E. Gray St., Apt. 9, Louisville, Ky.
Boucher, Hazen A. (47)
3204 N.E. 31st, Portland 12, Oreg.
Boucsein, William Geo. (22)
5 Wyndcrest Ave., Catonsville 28, Md.
Boughton, Lloyd L. (26)
Gardner, Kans.
Bourgeois, Leroy A. (47)
R. F. D. 1, Box 3, Scott, La.
Bowater, Joseph S. Jr. (49)
123 Country Club Dr., Elmira, N. Y.

Bowen, Reginald S. (48)
320 S. 41st St., Louisville 2, Ky.
Bowen, Ruth L. (47)
7 Bradley St., Carrollton, Ga.
BOWER, EDWIN L. (09)
81 Highwood Ave., Tenafly, N. J.
Bower, James D. (45)
64 Main St., Wellsboro, Pa.
BOWER, LAWRENCE A. (41)
11 Laurel Ave., Tenafly, N. J.
BOWER, ROBERT E. (39)
41 Magnolia Ave., Tenafly, N. J.
Bower, Robert H. (47)
2238 Homestead Dr., Columbus, Ohio.
Bower, S. Walley (34)
435 Tacoma Ave., Buffalo, N. Y.
Bowerman, K. B. (31)
498 Post St., San Francisco, Calif.
Bowers, Frank H. (46)
4604 Laurel, Bellaire, Tex.
Bowers, Gamble M., II (47)
1000 E. Cary St., Richmond 11, Va.
Bowers, Roy A. (39)
Univ. of New Mexico, Coll. of Pharmacy, Albuquerque, N. Mex.
Bowker, A. F. (44)
Milford, N. J.
Bowles, Grover C. Jr. (44)
Strong Memorial Hospital Pharmacy, Rochester 7, N. Y.
Bowles, J. A. C. (48)
421 Maple Ave., North Hills, Pa.
Bowles, Mary L. (46)
739 University Park, Rochester 7, N. Y.
Bowles, Robert H. (47)
2921 Louisiana Ave., Minneapolis 16, Minn.
Bowman, Burton (47)
3807 Alta Vista Ter., Chicago 13, Ill.
Bowman, R. C. (46)
2223 Snyder Ave., Philadelphia 45, Pa.
Bowman, Reginald H. (47)
P. O. Box 118, Hayward, Calif.
BOWMAN, WALDO MOFFETT (05)
Box 1377 C. S., Toledo, Ohio.
Boyden, Hubert E. (46)
4830 Walton Ave., Philadelphia 43, Pa.
Boyden, Walter E. (44)
1632 Harvard Ave., Salt Lake City 5, Utah.
Boye, Arthur J. (47)
2635 S. 20th St., Lincoln, Nebr.
Boyer, Edward J. (47)
941 E. Dayton St., Madison 3, Wis.
Boyer, Joseph A. (46)
Route 1, Box 337, Breaux Bridge, La.
Boynoff, Morris (48)
537 Albemarle St., El Cerrito, Calif.
Boyt, Arnold A. (43)
73 Main St., South River, N. J.
Bozza, Dominick, (49)
94 N. Goodwin Ave., Elmsford, N. Y.
Bracho, Gloria (45)
School of Pharmacy, Purdue Univ., Lafayette, Ind.
Bracken, Harold A. (39)
1309 E. 45th St., Seattle 5, Wash.
Bracken, Jim L. (47)
1234-23rd St., N., Seattle 2, Wash.
Bracken, L. D. (28)
1314 Fourth Ave., Seattle, Wash.
Bradley, Barbara M. (47)
R. D. 7, Box 115, Pittsburgh 29, Pa.
Bradley, Charles L. (46)
7332 Jeanette St., New Orleans 18, La.
Bradley, Dorothy L. (49)
Route 2, Box 99, Puyallup, Wash.
Bradley, Herbert A. (49)
29 Greene St., Pawtucket, R. I.
Bradley, Max (49)
Monroeville, Ala.
Bradner, Robert D., Jr. (47)
33 Watchung Plaza, Montclair, N. J.
Bradshaw, Barbara (48)
Route 2, Box 764, Oswego, Oreg.
Bradshaw, Charles C. (48)
7133 Park Rd., Kansas City, Mo.
Bradt, F. T. (39)
5232 Second Ave., Detroit, Mich.
Brady, Dessie Marie (44)
Route 1, Sunnyside, Wash.
Brady, Edward S., II (42)
1436 W. 48th St., Los Angeles 37, Calif.

**Brady, Eugene T. (45)**
713 Main St., Martinez, Calif.
Brady, St. Elmo (36)
Fisk Univ., Nashville, Tenn.
Braga, Mario (38)
Caixa Postal 3061, Rio de Janeiro, Brazil, S. A.
Brahen, Leonard S. (48)
622 W. Huntingdon St., Philadelphia 33, Pa.
Braiden, Mary C. (48)
203 S. Hoover St., Los Angeles 4, Calif.
Brainin, William D. (48)
2964 Williamsbridge Rd., New York 67, N. Y.
Braithwaite, Elliott R. (46)
Manti, Utah.
Brake, Charlie F. (49)
334 S. Main St., Burkesville, Ky.
Brake, Mrs. John W. (49)
334 S. Main St., Burkesville, Ky.
Braley, A. A. (44)
738 St. Helens Ave., Tacoma 2, Wash.
Braley, Ed. R. (44)
1210—4th Ave., Seattle 1, Wash.
Braley, Joseph G. (46)
Townsend, Mont.
Braman, E. J. (41)
c/o C. M. Bundy Co. 329 Perry St., Cincinnati, Ohio.
Branard, Ethyl (48)
Research Hospital, 2300 Holmes, Kansas City, Mo.
Brandenberg, Emory H. (48)
Box 556, South Miami, Fla.
Brandfonbrenner, Caryl (48)
3021 Br. 12th St., Brooklyn, N. Y.
BRANDT, HERBERT G. (49)
26 W. Wyomissing Ave., Mohnton, Pa.
Brandt, J. M. (49)
101 E. Jackson St., Phoenix, Ariz.
Brannon, Boyce L. (22)
296 Vanderbilt Rd., Biltmore Sta., Asheville, N. C.
Brannon, James L., Jr. (47)
3917 Van Buren, Bellwood, Ill.
Bransky, Joseph M. (47)
Suite 605 Custom House, 2nd & Chestnut Sts., Philadelphia 6, Pa.
Branson, Joanne, B. (49)
722 S. 25th St., Manitowoc, Wis.
Brant, Richard F. (46)
Winter General Hospital, Topeka, Kans.
Brantley, John C., Jr. (32)
1920 St. Marys St., Raleigh, N. C.
Braquet, Antoine J., Sr. (47)
214 N. Cushing Ave., Kaplan, La.
Brasch, Leon P. (42)
2285 Clairmount St., Detroit, Mich.
Brasseur, Gaspard G. (47)
510 Nicholas St., Vincennes, Ind.
Bratt, Ramon D. J. (48)
3910 Florida St., San Diego 4, Calif.
Brau, Leo C. (46)
Brau Drug, Mt. Pleasant, Iowa
Braubach, Charles (18)
110 Westchester Ave., Port Chester, N. Y.
Braudt, Raymond L. (46)
8 Sudbury St., Worcester 8, Mass.
Braun, Carl H., Jr. (43)
212 San Miguel Way, San Mateo, Calif.
Braun, Carl L. (15)
80 E. Long St., Columbus, Ohio.
Braverman, Herbert (48)
47 Holsman St., Paterson 1, N. J.
Bravin, Henry J. (47)
91 Lefferts Ave., Brooklyn, N. Y.
Brawner, Alvie R. (48)
92 Oak St., Battle Creek, Mich.
Braz, Henry N. (46)
597 Tower St., Fall River, Mass.
Breau, Francis Leo (47)
670 Main St., Moncton, N. B., Canada.
Breaux, Lee A. J. (46)
522 Fifth St., Jennings, La.
Breazeale, Jefferson L., Jr. (47)
c/o Byrne Drug Co., Maryville, Tenn.
Brecht, E. A. (40)
School of Pharmacy, Univ. of North Carolina, Chapel Hill, N. C.
Breck, Edward J. (37)
c/o John H. Breck, Inc., 115-19 Dwight St., Springfield, Mass.
Breckow, R. F. (41)
Box 8, Alma, Wis.
Breckow, Willard E. (43)
Alma, Wis.
Breese, Murray (39)
12 E. 41st St., New York, N. Y.
Bremner, Margaret (45)
1790 Grand Blvd., Euclid 17, Ohio.
Brenner, Emanuel (49)
3618 Montgomery Rd., Cincinnati 7, Ohio.
Brenner, M. R. (42)
290 W. Main St., Moorestown, N. J.
Brennglass, Edwin N. (45)
Chief Chemist, Los Angeles Div., Purepac Corp., 360 E. 2nd St., Los Angeles 12, Calif.
Brent, Bernard J. (44)
127 Essex Ave., Montclair, N. J.
Brenwasser, H. (36)
226—9th. Ave., New York, N. Y.
Breon, George A., IV (46)
4435 Farnam St., Omaha, Nebr.
Breslow, Samuel (46)
301 Clark St., Hillside, N. J.
Bresoff, Marvin M. (47)
2356 Sturtevant Ave., Detroit 6, Mich.
Bressler, Charles (46)
19 S. Washington Ave., Bergenfield, N. J.
Bresticker, Ben (49)
8118 Lullaby Lane, Van Nuys, Calif.
Brettschneider, Jacob (45)
901 Main St., Willmantic Conn.
Brevnik, Emil (46)
1918 Blue Island Ave., Chicago 8, Ill.
BREWER, HOWARD D. (02)
45 Artic St., Worcester, Mass.
Brewer, John H. (48)
Hynson, Westcott & Dunning, Baltimore, Md.
Brewer, John M. (45)
3332 S. Westnedge Ave., Kalamazoo 56, Mich.
Brewer, Lester R. (42)
1173 Lee St., S. W., Atlanta, Ga.
Brewer, Mrs. Myrdas (43)
c/o Coll. of Pharmacy, Univ. of Arizona, Tucson, Ariz.
Brewer, Willis R. (46)
c/o College of Pharmacy, Univ. of Arizona, Tucson, Ariz.
Brewton, Tilda Jane (45)
c/o Lane Drugs, Columbus, Ga.
Brickman, Bernard (49)
953 Stanyan St., San Francisco 17, Calif.
Brickman, Louis (48)
212 Reed St., Philadelphia 47, Pa.
Bridges, Henry (46)
2450 Wylie Ave., Pittsburgh 19, Pa.
Bridges, Stanley L. (46)
311 N. Third St., Monroe, La.
Bried, Clement (47)
1924—7th. Ave., Oakland 6, Calif.
Briggs, Adelbert E. (49)
4706 Q½ St., Galveston 1, Tex.
Briggs, Arthur B. (41)
186 Puritan St., Highland Park, Mich.
Briggs, Cora M. (45)
410 Federal Securities Bldg., Lincoln 8, Nebr.
Briggs, Emily U. (45)
1528 El Camino Real, San Mateo, Calif.
Briggs, William Paul (28)
6600 Seventh St., N. W., Washington, D. C.
Brill, Frederic J. (39)
719 Commonwealth Ave., New York, N. Y.
Brillhart, Russell E. (35)
915—39th St., Des Moines, Iowa.
Brin, Mandel (46)
10048 S. Indianapolis Ave., Chicago 17, Ill.
Brink, Paul F. (45)
4200 Troost Ave., Kansas City 4, Mo.
Brinkel, E. Willard, Jr. (45)
106 Florence Ave., Buffalo 14, N. Y.
Brinkman, B. J., Jr. (46)
6242 Delor St., St. Louis 9, Mo.
Brinkman, Walter R. (48)
c/o J. B. Lippincott Co., E. Washington Sq., Philadelphia 5, Pa.
BRINTON, CLEMENT S. (07)
213 Euclid Ave., Haddonfield, N. J.
Briry, William S. (31)
164 Warwick Rd., Melrose, Mass.
Brite, Irl (39)
607 Wallace Bldg., Little Rock Ark.
BRITT, FRANCIS A. (26)
1 N. Fulton Ave., Evansville 10, Ind.
BRITT, LEWIS C. (30)
216 Main St., Independence, Oreg.
Brittain, William L. B. (46)
4029 Gilmore Ave., Cincinnati, 9, Ohio.
Brna, Paul W. (40)
1811 W. Estes Ave., Chicago 26, Ill.
Broadbent, Ralph A. (46)
1102 E. Mt. Hope, Lansing 10, Mich.
Broadhurst, George T. (47)
1333 Nicholson Ave., Lakewood 7, Ohio.
Broadman, George H. (39)
284 State St., Perth Amboy, N. J.
Brochmann-Hanssen, Einar (47)
Univ. of Calif. Coll. of Pharmacy, Medical Center, San Francisco 22, Calif.
Brock, Irwin (44)
536 Broadway, Buffalo 4, N. Y.
Brockhoff, L. P. (45)
c/o Wyeth Inc., 8100 McCormick Blvd., Chicago 45, Ill.
Brodie, Donald C. (42)
Univ. of California Coll. of Pharmacy, Medical Center, San Francisco 22, Calif.
Brodie, Louis (47)
3017—22nd St., San Francisco, Calif.
Brodovsky, William D. (43)
503 W. San Carlos, San Jose, Calif.
BRODY, BERNARD B. (31)
3757 Giddings St., Chicago 25, Ill.
Brody, Margaret (48)
2123 Grandview, Pl., La Crosse, Wis.
Broenen, Arthur J. (46)
3433 W. Lisbon Ave., Milwaukee 8, Wis.
Brogle, David J. (47)
6834 Griesmer Ave., North College Hill 24, Ohio.
Bromberg, Irving H. (47)
351 E. 173rd St., New York 57, N. Y.
Bromberg, Irwin (46)
1954 S. 60th St., Philadelphia 42, Pa.
Bromley, LeVon M. (45)
660 Lincoln Ave., Palo Alto, Calif.
Bronfein, Eli (45)
1093 Gerard Ave., New York 52, N. Y.
Bronfeld, Martin (43)
1645 N. Courtney, Apt. 5, Los Angeles 46, Calif.
Bronfman, Nathan (47)
11 Oak St., Weehawken, N. J.
Bronfman, Samuel T. (47)
8735 Bay Pkwy., Brooklyn 14, N. Y.
Brooke, Don A. (46)
Brooke Drug Store, Hastings, Nebr.
Brooke, Marshall D. (48)
3104 N. Richmond St., Chicago 18, Ill.
Brooker, Merrill S. (45)
2764 Lancashire Rd., Cleveland Heights, Ohio.
Brooks, Carleton F. (48)
3311 Fairfield Ave., Cincinnati, Ohio.
Brooks, Howard R. (48)
904 Stony Hill Rd., R. F. D. 1, Springfield, Mass.
Brooks, Max (46)
39 W. 58th Ter., Kansas City 2, Mo.
Broughton, Robert N. (45)
460 Roosevelt Ave., Springfield 8, Mass.
Brouse, George E. (46)
220 Bridge St., Phoenixville, Pa.
Broussard, Alice A. (43)
924 Lowerline St., New Orleans 18, La.
Brow, C. F. Jr. (32)
127 Stafford Rd., Fall River, Mass.
Brown, Albert G. (46)
5245 Lansdowne Ave., St. Louis 9, Mo.
Brown, Albert T. (49)
7525 Pearl St., Jacksonville 6, Fla.
Brown, B. B. (36)
4301 Oak Lawn Ave., Dallas, Tex.
Brown, Bliss E. (48)
366 Lawrence St., W., St. John, N. B., Canada.

Brown, Carl H. (47)
U. S. Public Health Service Hospital Lexington, Ky.
Brown, Clarence M. (21)
2425 Abington Rd., Columbus, Ohio.
Brown, Clayton M. (45)
P. O. Box 880, Anchorage, Alaska.
Brown, Curtis W. (47)
5187 Kensington Ave., St. Louis 20, Mo.
Brown, D. W. (41)
116 S. Main St., Greenville, S. C.
BROWN, E. HOWARD (23)
528 Academy Rd., Winnipeg, Manitoba, Canada.
Brown, Earl W. (47)
Montross, Pharmacy, Winterset, Iowa.
Brown, Edwin A. (46)
629 W. Sanborn St., Winona, Minn.
Brown, Elizabeth A. (47)
5950 McPherson, St. Louis 12, Mo.
Brown, Eugene B. (46)
1911 N. 35th, Milwaukee 4, Wis.
Brown, Gabriel H. (32)
Cleveland State Hospital, Turney Road, Cleveland 5, Ohio.
Brown, George J. (46)
506 Broadway, Scranton 5, Pa.
Brown, Harold K. (47)
4808 Illinois Ave., N. W., Washington 11, D. C.
Brown, Harold R. (49)
2726 Erie Ave., Cincinnati 8, Ohio.
Brown, Harry H. (48)
1397 Prime Ct., Pasadena, 6 Calif.
Brown, Harry R. (48)
801 W. Plum St., Compton, Calif.
Brown, Henry (31)
821 Taylor Ave., Scranton, Pa.
Brown, J. Emmett (41)
318 Lemon St., Palatka, Fla.
Brown, John L. (47)
172 E. Main St., Benton Harbor, Mich.
Brown, Joseph (49)
1039 W. Wyoming Ave., Philadelphia 40, Pa.
Brown, Kenneth H. (48)
326 W. Miner St., West Chester, Pa.
Brown, Leo C. (46)
925 Neland, S. E., Grand Rapids, Mich.
BROWN, LINWOOD A. (09)
125 Johnston Blvd., Lexington, Ky.
Brown, Otis T. (48)
Cambridge State Hospital, Cambridge, Ohio.
Brown, Paul F. (45)
2714 Columbus Ave., Apt. 4, Anderson, Ind.
Brown, Phyllis (45)
3720 Maxwell Rd. Toledo 6, Ohio.
Brown, Ray W. (46)
1304—1st Ave., S., Great Falls, Mont.
Brown, Rolland E. (42)
221 S. Walnut St., Reedsburg, Wis.
Brown, Ruth E. (49)
3821 Whitman Ave., Seattle 3, Wash.
Brown, S. George (45)
105 Pleasant St., Concord, N. H.
Brown, W. Edwin (46)
P. O. Box 21, Quincy, Ill.
Brown, Wesley, Jr. (47)
5879 Begole, Detroit 10, Mich.
Brown, William F. (49)
1328 Main St., Grayson, Ky.
Browne, Frederic T., Jr. (46)
218 Union St., New Bedford, Mass.
Browne, Joe E. (46)
610 S. Richmond, Albuquerque, N. Mex.
Browning, Glen F. (48)
760 Ellicoth St., Buffalo, N. Y.
Brownlee, Helen E. (47)
6901 S. Newton, Minneapolis 19, Minn.
Broxmeyer, Jacob (46)
5301 Frankford Ave., Philadelphia 24, Pa.
Brozda, Joseph C. (46)
306 Howard St., East Pittsburgh, Pa.
Bruccoli, Joseph M. (48)
994 Morris Park Ave., New York 60, N. Y.
Bruce, Hallie (38)
Univ. of Minn. Hospital, Minneapolis, Minn.
Bruce, John B. (46)
School of Pharmacy, Univ. of Oklahoma, Norman, Okla.
Bruce, Kenneth A. (48)
18 Prospect Ave., Brockton 46, Mass.
Bruce, William D. (49)
14 Carleton, Portland 4, Maine.
Brudno, M. G. (39)
500 Commonwealth Ave., Boston, Mass.
Bruggeman, Anna M. (45)
340 Winthrop St., Toledo 10, Ohio.
Brumbaugh, Vance E. (42)
The Reading Hospital, Reading, Pa.
Brumer, Sidney (46)
62 Leake Ave., Rolando Park, Richmond 24, Va.
Brunberg, Edward W. (47)
1 Emerson Ave., Harrison, N. Y.
BRUNELLE, ALBERT JOSEPH (10)
17 School St., Hyannis, Mass.
Brunelle, Lucien R. (45)
106 Textile Ave., Lowell, Mass.
Bruner, Dallas L. (43)
842 Des Moines Bldg., Des Moines 9, Iowa.
Bruner, John L. (45)
1192 Grand Ave., St. Paul 5, Minn.
Brunet, John (46)
1306 S. Main St., Santa Ana, Calif.
Brunetti, Glauco E. (47)
Qta. Mi Deseo Ave., Prolongacion del Gortijo, Los Rosales, Caracas, Venezuela.
Brunger, Carroll E. (43)
312 W. Valley, El Monte, Calif.
Bruni, James J. (48)
88 Wall St., Torrington, Conn.
Brunman, William (49)
73—Ol Yellowstone Blvd., Forest Hills, L. I., N. Y.
Brunner, E. J. (49)
319½ Bellinger St., Eau Claire, Wis.
Bruns, George (38)
218—8th Ave., New York, N. Y.
Brunstein, Jacob J. (45)
2508½ E. 75th St., Chicago, Ill.
Bruschera, James J. (49)
545 Kearney St., El Cerrito, Calif.
Bruss, Bernard W. (47)
1028-A S. 7th St., Milwaukee 4, Wis.
Bruton, John S. (46)
Public Sq., Dover, Tenn.
Bryan, Carl, Jr. (47)
2864 Eighth Ave., New York 30, N. Y.
Bryan, Jack T. (48)
252-U Flavet Village 111, Gainesville, Fla.
Bryant, Charles C. (42)
7242 Winona, Allen Park, Mich.
Bryant, Elmer R. (49)
108 S. Madison, Bloomfield, Iowa.
Bryant, G. L. (46)
652 Canton Rd., Akron 12, Ohio.
Bryant, Wallace E. (46)
804 Grand Ave., Glenwood Springs, Colo.
Brzezinski, J. Henry (45)
Troy Hill Rd., Whippany, N. J.
Brzozowski, John A. (47)
7439 Michigan Ave., Detroit 10, Mich.
Bubeck, Percy J. (47) 2000 E. Main St., Apt. 9, Schuykill Haven, Pa.
Buccanning, LeRoy H. (46)
320 Main St., Montour Falls, N. Y.
Buccellato, Josephine (43)
1732 Bay Ridge Pkwy., Brooklyn 4, N. Y.
Buch, Harry, H. (32)
135 State St., Harrisburg, Pa.
Buch, Miguel A. Santos (37)
Linea Calle. No. 552, Esquina D. Vedado, Havana, Cuba.
Buch, Stanley J. (49)
W. King & Charlotte Sts., Lancaster, Pa.
Buchanan, David B. B. (46)
25-27 S. Second, Saint Clair 1, Pa.
Buchanan, L. J. (47)
Hartington, Nebr.
Buchi, Jakob (47)
Clausiusstrasse 25, Zurich 6, Switzerland.
Buchman, A. G. (45)
Stephenson Ave., Iron Mountain, Mich.
Buchok, Nellie (49)
86 Warren St., Meriden, Conn.
Buchter, John A. (47)
5300 N. Bayridge, Milwaukee 11, Wis.
Buck, Frederick D. (48)
548 Johnson St., Kingston, Ont., Canada.
Bucke, William S. (46)
15th & Ball Sts., Lafayette, Ind.
Buckingham, Elbert R. (45)
127 N. Jackson St., Roseburg, Oreg.
Buckland, Joan H. (49)
84 Pearson Rd., Somerville, Mass.
Buckley, A. F. (49)
1112 N. Walker, Oklahoma City 3, Okla.
Buckley, Thomas K. (48)
Newhebron, Miss.
Buckman, George A. (46)
Clinic Bldg., Marshfield, Wis.
Buckmaster, Marion A. (49)
Pharmacist, Kaiser Fontana Hospital, Fontana, Calif.
Buckwalter, Frank H. (46)
304 Cornwall Dr., Dewitt, N. Y.
Budin, Charles A. (46)
820 Elizabeth St., Ridgefield, N. J.
Budny, Jerome V. (47)
5358 S. Carpenter, Chicago 9, Ill.
Budoff, David (46)
48 Ohio Ave., Long Beach, N. Y.
Buechler, Leonard (47)
279 Schley St., Newark 8, N. J.
Buehler, Carl T. (38)
108 S. Maple, Eldon, Mo.
Buehler, Edward G. (45)
6052 Madison St., Brooklyn 27, N. Y.
Buehler, William W. (46)
345 E. 5th St., Long Beach, Calif.
Buehring, Harry F. (46)
75 Mary Day Ave., Pontiac, Mich.
Buell, Clarence A. (49)
817 Mason, Toledo 5, Ohio.
Buell, John A. (49)
702 Highland St., Fulton, N. Y.
Buelow, Donald W. (43)
342 N. Western Ave., Chicago 12, Ill.
Bukey, Fred S. (23)
Smith Dorsey Co., Lincoln, Nebr.
Bulda, Frank E. (46)
c/o St. John's College of Pharmacy, 96 Schermerhorn St., Brooklyn, N. Y.
Bull, Edward R. (46)
1128 Congress St., New Orleans, La.
Bull, Ellis E. (47)
Park Manor Apts., 107, Olympia, Wash.
Bull, Eva (48)
Park Manor Apts., 107, Olympia, Wash.
Bullard, K. C. (49)
P. O. Box 1344, St. Augustine, Fla.
Bullock, John A., Jr. (45)
720 Parker St., Chester, Pa.
Buncher, Matilda (48)
353 Oak St., Perth Amboy, N. J.
Bundt, C. R. (37)
Toledo Medical Bldg., 314 Michigan St., Toledo, Ohio.
Bundy, Joanne (45)
1521 E. Park Pl., Ann Arbor, Mich.
Bunkfeldt, Rudolf (46)
c/o The Wander Co. 360 N. Michigan Ave., Chicago 1, Ill.
Bunting, George A. (24)
32nd & Falls Cliff, Baltimore 11, Md.
Buono, Cosmo (46)
850 Kindermack Rd., River Edge, N. J.
Burbela, Joseph A. (46)
30 Fountain St., New Haven 15, Conn.
BURCKART, WILLIAM E. (46)
510 W. 10th St., Erie, Pa.
Burckart, William M. (46)
c/o Schering Corp., 2 Broad St., Bloomfield, N. J.
Burckhalter, Joseph H. (47)
School of Pharmacy, Univ. of Kansas, Lawrence, Kans.
Burdick, D. D. (25)
Box 112, Rochester, Minn.
Burdick, Ellis E. (44)
18 Lake Ave., Lancaster, N. Y.
Burdick, W. A. (44)
Reedsport, Oreg.
Burdine, Asa V. (30)
4704—15th St., N. W., Washington, D. C.

Bures, Carmen C. (49)
#162 Del Brey St., Santurce U. P. R.
Burgard, Galen G. (46)
7436 Warner Ave., St. Louis, Mo.
Burger, Roy T. (47)
289 S. K-St., Dinuba, Calif.
Burgess, James N. (47)
Gilder & Weeks Drug Store, Newberry, S. C.
Burgess, John (26)
421 Bloor St., E., Toronto, Ont., Canada.
Burgie, Ruth E. (46)
1609 Summit St., Toledo, Ohio.
Burgison, Raymond M. (49)
802 Reservoir St., Baltimore 17, Md.
Burkart, Alfred F. (44)
16 N. Madison, Mason City, Iowa.
Burke, Bernard M. (45)
341 Washington St., Newton 58, Mass.
Burke, Edmund E., Jr. (47)
147-15 Northern Blvd., Flushing, N. Y.
Burke, Ernesto, Jr. (48)
Box 1186, Panama, Rep. de Panama.
Burke, James E. (47)
1042 Military, Baxter Springs, Kans.
Burke, S. Robert (43)
c/o Farmingdale Pharmacy, 73 Main St., Farmingdale, N. J.
Burke, T. Willard (45)
203 Essex St., Lynn, Mass.
Burkhalter, Harold C. (47)
1346 W. Losey, Galesburg, Ill.
Burkhart, George, Jr. (45)
4014 S. Artesian Ave., Chicago 32, Ill.
Burkhouse, Kenneth I. (46)
Box 145, Mt. Jewett, Pa.
Burks, Harry O. (46)
16 Village Green, Orange, N. J.
Burlage, Henry M. (26)
702 E. 43rd, Austin, Tex.
Burley, Nelson J. (48)
Detroit Coll. of Pharmacy, 2020 Witherell St., Detroit 26, Mich.
Burnett, Benjamin E. (20)
P. O. Box 11, Altavista, Va.
Burniac, Joseph J. (29)
9660 Longacre, Ave., Detroit 27, Mich.
Burns, Cornelius J. (28)
143 Main St., Danbury, Conn.
Burns, G. I. (46)
Royal Adelaide Hospital, North Terrace, Adelaide, S. Australia.
Burns, Gene A. (47)
629 W. Washington Ave., Shelbyville, Ind.
Burns, John M. (47)
11 Union St., Morrisville, Pa.
Burns, Patricia A. (49)
1415 Robinwood, Lakewood, Ohio.
Burns, Robert (49)
1109—46th Ave., Rock Island, Ill.
Burns, T. A. (49)
11 Granville Dr., Silver Springs, Md.
Burns, Vesta S. (47)
4614 Sunset Blvd., Los Angeles 27, Calif.
Burns, William S. (47)
143 Main St., Danbury, Conn.
Burrin, Philo (38)
6401 Spring Mill Rd., Indianapolis, Ind.
Burris, Franklin G. (46)
202½ N. Sunset, Temple City, Calif.
Burros, Stanton (46)
1732 S. 58th St., Philadelphia, Pa.
Burroughs, Edward A. (47)
396 Main St., Metuchen, N. J.
Burrows, Roland D. (47)
W. Ford St., Osceola, Ark.
Bursch, Vernon W. (47)
Mahnomen, Minn.
Bursik, Robert J. (48)
6018 Poppleton Ave., Omaha 6, Nebr.
Burson, Clarence A. (46)
Walsh, Colo.
Burson, Marvin J. (47)
Dyer, Ind.
Burstein, Joel (43)
103 Lyons Ave., Newark 8, N. J.
Burston, Julius (46)
2755 Yorkshire Rd., Pasadena 8, Calif.
Burt, Edward C. (41)
136 Concord St., New Haven, Conn.
Burt, Frances F. (49)
700—12th, Rock Island, Ill.
BURT, JOSEPH B. (22)
811 Elmwood, Lincoln, Nebr.
Burton, James H. (47)
520 W. 29th St., Connersville, Ind.
Burton, Luther M. (47)
31 Cricket Ave., Ardmore, Pa.
Buscemi, William V. (48)
9 Crosby Ave., Brooklyn 7, N. Y.
Busch, Oliver W. (39)
8023 Snow Rd., Cleveland 9, Ohio.
Bush, Gayle C. (49)
2700 Taylorsville Rd., Louisville, Ky.
Bush, Ted H. (47)
1215 Ethel Ave. Lakewood 7, Ohio.
Bush, William (41)
1737 S. W. 11th St., Portland, Oreg.
Busick, Claude L. (48)
1029 N. Hunter, Stockton 18, Calif.
Busis, David (46)
804 N. Negley Ave., Pittsburgh, Pa.
Buss, Virgil A. (49)
912 Spring St., Quincy, Ill.
Busse, Louis W. (42)
School of Pharmacy, Univ. of Wisconsin, Madison, Wis.
Busse, Ralph H. (46)
204 Main St., Watertown, Wis.
Butler, Albert Q. (42)
3600 N. Second St., St. Louis, Mo.
Butler, Calvin L. (43)
271 Western Ave., Lynn, Mass.
Butler, Charles S. (46)
Route 6, Box 404-B, Bessemer, Ala.
Butler, Edward A. (46)
178 Center St., West Point Pleasant, N. J.
Butler, Frederick V. (45)
2230 Balboa St., San Francisco, Calif.
Butler, Larre F. (47)
Box 6, Iota, La.
Butler, Luther E. (47)
413 W. Humble, Goose Creek, Tex.
Butler, Rex L. (47)
17 Lee St., Apt. D, Clayton 5, Mo.
Butler, Stewart H. (45)
U. S. Marine Hospital, Neponsit, Rockaway Beach, L. I., N. Y.
Butler, Wanda J. (42)
Creighton Univ., Coll. of Pharmacy, N. 14th & Davenport Sts., Omaha 2, Nebr.
Butnick, Abraham (45)
12109 St. Clair Ave., Cleveland, Ohio.
Buttery, W. P. (47)
800 Amethy St., Alta Loma, Calif.
Butts, John H. (46)
1510 Olds Tower, Lansing 8, Mich.
Buttwinick, Maurice (49)
1192 Ocean Ave., Brooklyn, N. Y.
Butz, John H. (48)
6631 Lorrain Ave., Cleveland 2, Ohio.
Buxton, Charles E. (46)
2811 F St., Eureka, Calif.
Buxton, Horace C. (47)
126 Main, Fort Fairfield, Maine
Buyniski, Edward F. (39)
104 Pickwick Lane, Oak Ridge, Tenn.
Buyniski, Joseph P. (25)
100 Millbury St., Worcester, Mass.
Buzard, Mack (47)
919 W. Washtenaw St., Lansing, Mich.
Buzzelli, Victor A. (47)
3584 Palmerston Rd., Shaker Heights 22, Ohio.
Buzzett, Bernard G. (49)
P. O. Box 200, Apalachicola, Fla.
Byard, Edward J. (38)
401 Simpson Ave., Clarksburg, W. Va.
Byars, James (44)
2102 Wroxton Rd., Houston 5, Tex.
Byars, Perrin C. (49)
115 S. Queen, Columbia 61, S. C.
Bye, G. Wayne (49)
Woodlawn Dr., New Albany, Ind.
Byington, S. J. (45)
128 Fulton, E., Grand Rapids 2, Mich.
Bylenok, Leo (45)
263 East Ave., North Tonawanda, N. Y.
Byrd, Michael L. (45)
1107 Myrtle Ave., Inglewood, Calif.
Byrd, Truston R. (47)
3803 Avenue F, Austin, Tex.
Byrn, Mary L. (48)
8 N. Senate Ave., Indianapolis 4, Ind.
Byrne, Emmett R. (49)
728 S. Humphrey Ave., Oak Park, Ill.
Byrne, Thomas K. (49)
100 E. Collins, Oxford, Ohio.
Byrnes, Ralph E. (47)
328 Maple St., San Diego 3, Calif.
Byrum, W. R. (46)
School of Pharmacy, Univ. of Arizona, Tucson, Ariz.
Bywater, William G. (46)
c/o S. B. Penick & Co., 50 Church St., New York 7, N. Y.

## C

Cabell, J. F. (47)
Hodgenville, Ky.
Cade, Arthur R. (49)
189 Irving Pl., Rutherford, N. J.
Cadenazzi, Stanley (43)
428 S. J St., Madera, Calif.
Cadman, M. Donald (46)
King St., Chappaqua, N. Y.
Caggiano, Thomas R. (48)
Port Jefferson Sta., N. Y.
Cahen, Raymond L. (48)
Maltbie Chemical Co., Box 303, Morristown, N. J.
Cahoy, Ben A. (49)
2422 Avenue D, Scottsbluff, Nebr.
Caimi, Agostino (36)
c/o Grecian Chemical Co., Inc., 2030 E. Willard St., Philadelphia, Pa.
Cain, A. L. (45)
Hampton, Ga.
Cain, Edelbert E. (45)
Apt. 1106, Waukegan Hotel, Waukegan, Ill.
Cain, Russell A. (30)
3617 N. Broad St., Philadelphia 40, Pa.
Cairncros, S. E. (35)
30 Memorial Dr., Cambridge, Mass.
Calasibetta, John (48)
618 Valley Rd., Montclair, N. J.
CALDWELL, A. LEE (34)
Route 14, Box 271, Indianapolis 44, Ind.
Caldwell, C. B. (48)
109 Oskaloosa St., Pella, Iowa.
Caldwell, Lewis M. (49)
1527 State St., Santa Barbara, Calif.
Caldwell, Stanley F. (46)
Lincoln Rd., Bentleyville, Pa.
Caleel, George T. (49)
18923 Santa Rosa, Detroit 21, Mich.
Calhoun, Lawrence H. (46)
421 W. Walnut St., Portland, Ind.
Califf, William L. (43)
124 Montague St., North Charleston, S. C.
Caligan, John A. (47)
Walgreen Drug Co., Greenville, S. C.
Call, Russell (46)
523 S. La Verne Ave., Los Angeles 22, Calif.
Callaghan, Percy J. (32)
621 Hanover St., Manchester, N. H.
Callahan, Edward L. Jr. (46)
2108 W. Ross Ave., Alhambra, Calif.
Callahan, Michael J. (49)
P. O. Box 1363, Ashland, Ky.
Callander, Raymond A. (40)
205 W. Second St., Duluth, Minn.
Callas, George (48)
Box 373, Oak Creek, Colo.
Callihan, Clinton L. (44)
Shreve, Ohio.
Callis, Fred C. (47)
11 E. Main, Los Gatos 9, Calif.
Calloway, Ed R. (46)
814 Yodkin St., Kingsport, Tenn.
Calvano, Michael A. (47)
2634 W. Lisbon Ave., Milwaukee, Wis.
Cameron, Inez O. (48)
Box 649, University, Miss.

Cameron, L. Catherine (48)
1227—25th St., Studio 3, Des Moines 11, Iowa.
Cameron, Lynn A. (44)
2716 E. Florence, Huntington Park, Calif.
Camick, Nelson B. (45)
42 Water St., Eastport, Maine.
Caminos, Josephine M. (49)
601 W. 163rd St., New York 32, N. Y.
Camp, Robert F. (47)
Route 1, Holland, Mich.
Campbell, Charles B. (45)
235 Cumberland Ave., Buffalo 20, N. Y.
Campbell, Clarence L. (49)
1705 Locust St., St. Louis 3, Mo.
Campbell, J. Clayton (42)
1668 Burlingame, Detroit 6, Mich.
Campbell, James A. (46)
980 N. Church St., Spartanburg, S. C.
Campbell, James B. (47)
Alabama Drug Co., Decatur, Ala.
Campbell, James E. (49)
211 W. 6th St., Uhrichsville, Ohio.
Campbell, John C. (47)
2232 W. Roscoe, Chicago 18, Ill.
Campbell, Marshall A. (49)
Pleasant Hill, Mo.
CAMPBELL, MILTON (02)
Easton, Md.
Campbell, Nina D'Anna (47)
80 N. Seventh St., San Jose, Calif.
Campbell, Robert A. (48)
Rte. 2, Box 99B, Tigard, Oreg.
Campbell, Ruth B. (49)
713 Avenue C, Galveston, Tex.
CAMPBELL, THEODORE, JR. (34)
2101 N. 63rd St., Philadelphia, Pa.
Campbell, Yale C. (39)
c/o Schieffelin & Co., Inc., 16 Cooper Sq., New York 3, N. Y.
Camps, Amado (49)
Laboratorios Lex, Apartado 161, Habana, Cuba.
Canaipi, Victor V. (45)
40 Forest St., Providence 6, R. I.
Canavan, Joseph P. (44)
340 Allen Ave., Portland 5, Me.
Cancienne, A. W. (46)
Box 225, New Orleans 3, La.
Candal, Joaquin L. (47)
M. Rivera 39, Fajardo, Puerto Rico.
Cannon, Kelly A. (46)
10404 Doty Ave., Inglewood, Calif.
Cannon, Louis K. (49)
3713 Decoursey Ave., Latonia, Ky.
Canter, Abraham R. (39)
Dravo Bldg., Pittsburgh 22, Pa.
Canter, Richard S. (46)
Dravo Bldg., Pittsburgh 22, Pa.
Capehart, Robert L. (49)
P. O. Box 169, Perry Point, Md.
Caperton, James H. (43)
404 Jefferson St., Shelbyville, Tenn.
Caplan, Paul G. (42)
1362 Westmoreland, Norfolk 8, Va.
Cappel, J. Ward, Jr. (43)
Kinder, La.
Cappiello, Joseph F. (46)
1611 Bergenline Ave., Union City, N. J.
Caprile, Nathan A. (47)
1453 Mason St., San Francisco 11, Calif.
Capriles, J. A. Vega (45)
Victoria Corn. Union, Ponce, Box 386, Puerto Rico.
Caprio, Caspio (48)
134 Ward Pl., South Orange, N. J.
Caprio, Nicholas M. (46)
102 Franklin St., Belleville, N. J.
Carbee, Carolyn M. (41)
640 N. Wabash Ave., Chicago 11, Ill.
Cardarelli, Victor A. (47)
4622 Winthrop Ave., Indianapolis 5, Ind.
Cardello, A. Paul (45)
288 Broadway, Revere 51, Mass.
Cardiff, Cecil G. (49)
1946 El Dorado Ave., Berkeley 7, Calif.
Carender, M. T. (45)
Stockton, Mo.
Carey, D. Malcolm (47)
224—16th, Denver 2, Colo.
Carey, Joseph T. (49)
4924 Miami St., Omaha 4, Nebr.
Carlan, C. B., Jr. (44)
405 Fredrick St., Bluefield, W. Va.

Carli, Edwin E. F. (49)
102 N. Mahoning Ave., Alliance, Ohio.
Carlisle, L. H. (49)
Alexander City, Ala.
Carlsen, Harry W. (47)
202 N. Sibley, Litchfield, Minn.
Carlson, Alfred W. (46)
2114 S. Jefferson, Spokane 9, Wash.
Carlson, Beverly J. (45)
College Hospital, Ames, Iowa.
Carlson, Donald R. (47)
Alta, Iowa.
Carlson, Edward H. (47)
626 Ninth Ave., Two Harbors, Minn.
Carlson, Franklin H. (46)
5134 Illinois St., Rockford, Ill.
Carlson, Herbert W. (47)
E. 9404 Sprague St., Dishman, Wash.
Carlson, Stephine O. (47)
1124 San Rafael Ave., Glendale 2, Calif.
Carmack, Edward E. (49)
Gen. Del., Poteau, Okla.
Carman, Orval E. (49)
1605 E. Gold, Albuquerque, N. Mex.
Carman, Paul E. (47)
513 Fifth St., S. E., Bristol, Tenn.
Carmel, Israel C. (43)
606 N. Dartmouth Ave., Albuquerque, N. Mex.
Carmichael, Cloid V. (47)
518 Broadway, Gary, Ind.
Carmody, Sara W. (46)
Margaret Hague Mat. Hospital, Clifton Pl., Jersey City, N. J.
Carnahan, Robert S. (48)
5th St., Newell, W. Va.
Carnahan, Samuel W. (44)
5th & Wash. St., Newell, W. Va.
Carney, George R. (49)
1607 Holland Ave., Utica, N. Y.
Carney, Henry F. (45)
30 N. Main St., Rochester, N. H.
Carney, Kenneth F. (49)
Richland Center, Wis.
Carofano, Edward (46)
567 Campbell Ave., West Haven, Conn.
Carpenter, Jerrold L. (46)
Denham Springs, La.
Carpenter, Lester J. (47)
1323 Milwaukee Ave., Racine, Wis.
Carpenter, Marlar L. (48)
181 Peachtree St., N. E., Atlanta, Ga.
CARPENTER, MEADE B. (42)
2528 River Ave., Mishawaka, Ind.
Carpenter, Ralph (45)
64 E. Adams St., Chicago 3, Ill.
Carr, C. Jelleff (33)
206 N. Tyrone Rd., Armagh Village, Baltimore 12, Md.
Carr, Samuel Hargis (47)
Hawesville, Ky.
Carrato, Carmen A. (47)
USPHS Medical Relief Sta., 225 Chestnut St., Philadelphia, Pa.
Carraw, Henry R. (46)
2. West School St., Bonne Terre, Mo.
Carrel, Marvin B. (44)
223 North Dr., Buffalo 16, N. Y.
Carris, P. J. (45)
Bridge St., DeWitt, Mich.
Carriveau, Clayton J. (48)
4601 S. 46th St., Milwaukee 14, Wis.
Carroll, E. J. (49)
210 Ladbroke Rd., Bryn Mawr, Pa.
Carroll, Jane (37)
St. Vincent's Hospital, Bridgeport, Conn.
Carroll, John J. (43)
320 E. 22nd St., Baltimore, Md.
Carroll, Philip (48)
1923 N. 8th St., Philadelphia 22, Pa.
Carroll, Richard E. (45)
Florence, Oreg.
Carson, Ben (43)
912 N. Vermilion, Danville, Ill.
Carson, Donald M. (47)
1578 Meridian Rd., Bellingham, Wash.
Carson, J. P. (47)
Applecreek, Ohio.
Carson, Lynn L. (36)
700 Charles St., Wellsburg, W. Va.

CARSTATER, JAMES C. (20)
233 Dunham Ave., W.E., Jamestown, N. Y.
Carter, A. E. (44)
796 Washington Rd., Grosse Pointe 39, Mich.
Carter, Carl E. (49)
Fitzgerald Drug Co., Frankfort, Ky.
Carter, Claude E. (49)
235 S. E. First Ave., Fort Lauderdale, Fla.
Carter, Edgar B. (25)
c/o Abbott Laboratories, North Chicago, Ill.
Carter, Floyd R. (49)
445 S. 1st West, Brigham, Utah.
Carter, Grover B. (46)
8002 Harvard, Chicago 20, Ill.
Carter, Joseph H. (46)
719 West Ave., Jenkintown, Pa.
Carter, Marie E. (46)
2031 Locust St., Philadelphia 3, Pa.
Carter, Troy L., Jr. (46)
c/o Veteran Adm. Hospital, New Orleans 12, La.
Cartland, George F. (31)
c/o The Upjohn Co., Kalamazoo, Mich.
Caruso, Carlos A. (48)
Box 757, San Carlos, Calif.
Caruso, Louis J. (46)
4 W. Church St., Bethlehem, Pa.
Caruso, Michael (47)
1605 E. McMillan St., Compton, Calif.
Caruso, Pat J. (47)
1801 Mifflin Rd., Pittsburgh, Pa.
Carver, Joe (48)
Route 3, Plainview, Tex.
Cary, Clifford M. (47)
1301 Villa St., Upper Racine, Wis.
Casas-Lajonchere, Felipe R. (46)
Apartado 1014, Habana, Cuba.
Case, F. M. (45)
158 Main St., Woburn, Mass.
Case, James L. (45)
353 Meridian St., East Boston 28, Mass.
Case, Joe S. (49)
97 E. Main St., Logan, Ohio.
Casey, E. J. (47)
1522 Bryn Mawr, Chicago, Ill.
Casey, Fred P. (47)
P. O. Box 163, Raven, Va.
Caskey, Eugene M. (34)
Box 696, Jacksonville, Tex.
Caspe, Saul (38)
490 West End Ave., New York, N. Y.
Casper, Isabella B. (45)
34 Westview Ave., Tuckahoe 7, N. Y.
Cassaday, Nancy J. (47)
342 Fairgreen Ave., Youngstown, Ohio.
Cassidy, Doris W. (48)
1424 South St., Vicksburg, Miss.
Cassler, Elmer H. (49)
Hills and Dales Road 1, Canton, Ohio.
CASTELLANOS, BAUDILIO (21)
Farmacia del Dr. B. Castellanos, Marcane, Oriente, Cuba.
Casterline, J. M. (38)
Grandview Hospital, LaCrosse, Wis
Castle, Raymond N. (46)
Univ. of New Mexico, Albuquerque, N. Mex.
Castner, William L. (46)
Carthage, Ind.
Castrodad, Rafael M. (49)
4 Praxedes Santiago St., Cidra, Puerto Rico.
Caswell, Charles F. (47)
23906 Edward, Dearborn, Mich.
Cataline, E. L. (39)
Univ. of Michigan, Coll. of Pharmacy, Ann Arbor, Mich.
Catchings, William H. (46)
Woodville, Miss.
Cate, Lawrence E. (46)
42 S. Main, Rochester, N. H.
Cathcart, John Robert (42)
Chester County Hospital, West Chester, Pa.
Catlin, Herbert M. (49)
4903 Patterson Ave., Chicago 41, Ill.
Cato, Vivian (47)
300 Boulevard, N. E., Atlanta 5, Ga.
Catt, Carl (46)
716 Ellisville Blvd., Apt. F, Laurel Miss.

Catts, David D. (43)
4225—9th St., Long Island City 1, N. Y.
Caughman, Marion R. (46)
Jefferson Davis Hwy., Columbia, S. C.
Cauterucci, Joseph F., Jr. (49)
7140 Cresheim Rd., Philadelphia 19, Pa.
Cavaiolo, P. J. (49)
1115 Bleecker St., Utica 3, N. Y.
Cavallaro, Manuel F. (48)
19 Gordon Park, Rochester 5, N. Y.
Cavell, Charles L. (47)
1125 Lansing Ave., Detroit 9, Mich.
Caviness, Troy (45)
Loving, N. Mex.
Cecil, Francis X. (46)
2015 Nowland Ave., Indianapolis, Ind.
Cejka, Otto F. (39)
4073 Loughborough Ave., St. Louis 16, Mo.
Cekansky, Alex E. (47)
5328-30 N. Sawyer Ave., Chicago 25, Ill.
Celidonia, Edward T. (49)
325 Southern Ave., Pittsburgh 11, Pa.
Celke, E. Alexander (45)
185 E. Hazeltine, Kenmore 17, N. Y.
Celozzi, Matthew J. (45)
Celozzi's Pharmacy, 301 S. Highland Ave., Baltimore 24, Md.
Cenci, Herman R. (45)
P. O. Box 972, Fresno 14, Calif.
Cerkez, Thomas J., Jr. (47)
4101 W. 26th St., Chicago 23, Ill.
CERMACK, EMIL (08)
8616—4th Ave., S., Birmingham, Ala.
Cermak, Frederick J., Jr. (44)
1599 Laclede Ave., South Euclid 21, Ohio.
Cermak, Theresa G. (45)
1599 Laclede Ave., South Euclid 21, Ohio.
Cermele, Michael J. (47)
524 Central Ave., Westfield, N. J.
Cerone, Lawrence (49)
831 Parkway Ave., Trenton 8, N. J.
Certo, Josephine (49)
4560 Carroll St., Pittsburgh 24, Pa.
Certo, Natalie (49)
4560 Carroll St., Pittsburgh, Pa.
Cervizzi, Vincenzo A. (48)
282 Sumner St., East Boston 28, Mass.
Cestaric, Elizabeth J. (48)
11501 Shaker Blvd., Cleveland 4, Ohio.
Cevela, Franklin C. (38)
217 Allen Ave., West Chicago, Ill.
Chace, Frank E. (45)
283 Jastram St., Providence 8, R. I.
Chadduck, Harry W. (46)
Box 419, Elizabeth, N. J.
Chadwick, Ronald H. (48)
14 Brookdale Gardens, Apt. A, Bloomfield, N. J.
Chagnon, Wilfred (30)
425 Centre St., Newton, Mass.
Chally, Joseph J. (47)
1821 S. Broad St., Philadelphia 48, Pa.
Chamberlin, Joseph K. (43)
16 Deaconess Rd., Boston, Mass.
Chamberlin, Neil T. (23)
2553 Edgerton Rd., Cleveland Heights 18, Ohio.
Chamberlin, Wayne E. (45)
439 Walden Ave., Toledo 5, Ohio.
Chambers, David M. (49)
718 W. Locust, Johnson City, Tenn.
Chambers, Floyd E., Jr. (46)
593 Pelham Rd., N. E., Atlanta, Ga.
Chambers, Melvin A. (46)
Coll. of Pharmacy, Univ. of Texas, Austin, Tex.
Chambers, Rosa A. (48)
523 Main, Walsenburg, Colo.
Chamblee, Noel E. (45)
S. Church St., Louisville, Miss.
Chan, Joan (45)
904 Center St., Elgin, Ill.
Chan, Leonard (46)
c/o South China Medical Supplies Co., Ltd., 305 China Bldg., Queen's Road, C, Hong Kong, China.
Chandler, Foster R. (49)
394 S. 2nd West, Tooele, Utah.
Chandler, N. W. (43)
6511—6th St., N. W., Washington, D. C.
Chandler, W. E. (46)
121 S. Seminole St., WeWoka, Okla.
Chandler, William L. (48)
Horton Drug Co., Athens, Ga.
Chaney, Brown C. (46)
105 Carrollton Ave., Greenwood Miss.
Channing, S. H. (41)
Kahoka, Mo.
Chapel, William B. (49)
63 Main St., Salamanca, N. Y.
Chaplin, Wayne M. (49)
116 Grand Ave., Hartford, Wis.
Chapman, Clifford W. (39)
32 S. Greene St., Baltimore 1, Md.
Chapman, Clyde F. (47)
325 W. Broadway, Louisville 2, Ky.
Chapman, Frederick Milton (49)
1323 Riverside Dr., Roseburg, Oreg.
Chapman, Walter A. (49)
1811 Central Ave., Nebraska City, Nebr.
Chapotel, Edward L. (46)
900 Camp St., New Orleans 13, La.
Chariton, Harry (47)
18501 Ventura Blvd., Tarzana, Calif.
CHARKOUDIAN, HARRY N. (32)
3270 Main St., Springfield 7, Mass.
Charles, Augustus L. (46)
522 Green Bay Rd., Winnetka, Ill.
Charles, George K. (44)
Parsons, Kans.
Charnowitz, Charles H. (47)
368 Watsessins Ave., Bloomfield, N. J.
Chase, Charles R., Jr. (47)
27 W. Magnolia St., Stockton, Calif.
Chase, Chester (45)
2235 Melville Dr., San Marino 9, Calif.
Chase, Dwight E. (47)
100 E. Main St., Mascoutah, Ill.
Chase, Jack L. (47)
4843 Escalon Ave., Los Angeles 43, Calif.
CHASE, WALTER M. (15)
c/o Parke, Davis & Co., Detroit 32, Mich.
Chasky, Hilbert P. (47)
3735 Oceanic Ave., Brooklyn 24, N. Y.
Chatkin, R. (46)
401 Summit Ave., Hagerstown, Md.
Chatterjee, Dr. Asima (48)
33 College St., Calcutta, West Bengal, India.
Chavez, Marco A. (47)
2980 Adeline St., Berkeley, Calif.
Chavkin, Leonard T. (46)
106 Devonshire Dr., New Hyde Park, L. I., N. Y.
Chechik, Samuel (41)
201 Lathrop St., Madison, Wis.
Chehak, Milo A. (23)
730 Merchants Natl. Bank Bldg., Cedar Rapids, Iowa.
Chelovich, V. (41)
2759 Logan Blvd., Chicago, Ill.
Chen, James L. (47)
20-67 Shore Blvd., Astoria, L. I., N. Y.
CHEN, K. K. (27)
c/o Eli Lilly & Co., Indianapolis, Ind.
Cheney, Ralph H. (39)
Biology Dept., Brooklyn College, Bedford Ave., & Avenue H., Brooklyn 10, N. Y.
Cherepow, John (44)
5358 Woodland Ave., Philadelphia 43, Pa.
Cherkas, Max (43)
7328 Greenhill Rd., Philadelphia 31, Pa.
Cherny, Morris R. (47)
167 N. Park St., East Orange, N. J.
Cherrie, John L. (46)
11211 Runnymede St., Sun Valley, Calif.
Chersky, Joseph (49)
3363 City Terrace Dr., Los Angeles 33, Calif.
Cheruff, Abraham (46)
Box 3071, University Station, Columbus, Ohio.
Chervenak, D. Louise (48)
Route 1, Leavenworth, Wash.
Chesebro, Glenn A. (47)
1010 Margaret St., Eau Claire, Wis.
Chesney, John G. (46)
1511 Minnesota Ave., Kansas City, Kans.
Chester, Roger H. (47)
5846 Rosslyn, Indianapolis, Ind.
Chevrier, Edward R. (46)
Box 144, Northfield, Ohio.
Chew, Ruby (44)
2420 W. Jefferson Blvd., Los Angeles 16, Calif.
Chewning, Reuben K. (47)
2332 W. Grace St., Richmond 20, Va.
Chichester, H. L. (34)
290 Washington Ave., Macon, Ga.
Chichester, Harry M. (48)
215 Fourth Ave., New York 3, N. Y.
CHIEGO, BERNARD (39)
154½—8th Ave., Newark 4, N. J.
Chilcoat, George O. (46)
1115-A Penna. Ave., S. E., Washington 3, D. C.
Chilcott, James C. (38)
c/o Maltine Co., Morris Plains, N. J.
Childers, A. Layle (46)
Childers Prescription Shop, First National Bank Bldg., Independence, Mo.
Childers, William H. (46)
Childers Prescription Shop, 1st National Bank Bldg., Independence, Mo.
Chiles, Philip L. (43)
335 E. 61st St., Los Angeles 3, Calif.
Chilgren, Edward A. (46)
1430 32nd Ave., San Francisco, Calif.
Chilivetis, George (49)
947 Cullon Ave., Chicago, Ill.
Chin, Doon P. (45)
108 Waverly Pl., San Francisco 8, Calif.
Chin Bing, Sylvia M. (44)
3615 Bauvis St., (Metairie) New Orleans 20, La.
Chinn, Bertha G. (46)
Firland Sanitorium, Seattle 55, Wash.
Chinn, James E. (49)
2940 N. E. Alberta St., Portland 11, Oreg.
Chiola, Albert J. (48)
301 N. High St., Millvillen, N. J.
Chirnside, Lloyd M. (46)
651 Bryant, Denver 4, Colo.
Chitharanjan, B. (47)
Y.M.C.A. P. 117 Saklat Mcce, Calcutta, India.
Chmielewski, Anthony M. (47)
712 W. Greenfield Ave., Milwaukee 4, Wis.
Chochola, James J. (47)
3758 W. 26th St., Chicago 23, Ill.
Chodorow, Harry (47)
3183 Delaware Ave., Kenmore 17, N. Y.
Choice, Ozell (49)
28 Munger Ave., Dayton 7, Ohio.
Chosy, Irene (46)
239 Southwood Ave., Columbus 7, Ohio.
Chrismer, R. Leslie (44)
361 Main St., Pennsburg, Pa., Montgomery County
Christensen, Arnold C. E. (46)
195 E. Broadway, Eugene, Oreg.
CHRISTENSEN, BERNARD V. (28)
Ohio State Univ., Coll. of Pharmacy, Columbus 10, Ohio.
Christensen, Bryant A. (46)
3921 Marathon, Los Angeles 27, Calif.
Christensen, Carl C. (45)
40 Jackson Village, Rutherford, N. J.
Christensen, Edward C. (46)
Coll. of Pharm., Univ. of Colo., Boulder, Colo.
Christensen, Helen (45)
716 W. Evelyn St., Lewistown, Mont.
Christenson, George L. (48)
6248 Bona Vista Pl., Cincinnati 13, Ohio.
CHRISTIAN, JOHN E. (42)
Purdue Univ., School of Pharmacy, West Lafayette, Ind.

Christian, R. L. (49)
Tallahassee Memorial Hospital, Tallahassee, Fla.
Christiansen, C. A. (49)
3976 Elston Ave., Chicago 18, Ill.
Christianson, Budford J. (48)
1944 Hazel Ave., Salem, Oreg.
Christie, Peggy J. (49)
College of Pharmacy, Univ. of Texas, Austin, Tex.
Christina, Vincent (23)
121 E. 24th St., New York, N. Y.
Christopher, Bernard T. (48)
5135 Kenwood, Chicago 15, Ill.
Christy, L. E. (46)
c/o Christy's Pharmacy, Fowler, Ind.
Chrysostom, Rachel K. (44)
Box 735, Charleston, S. C.
Chrzan, Clemens B. N. (47)
1686 S. 5th St., Milwaukee 4, Wis.
Chu, James (36)
47 Mott St., New York, N. Y.
Chubat, Jacob (43)
4359 N. Central Ave., Chicago 34, Ill.
Chvala, Frank J. (47)
1618 Second St., W., Ashland, Wis.
Chvala, J. Allen (47)
5201 W. 25th St., Cicero 50, Ill.
Ciccarelli, Richard (49)
35 Monmouth St., Lawrence, Mass.
Cichowski, Karna (47)
215 N. 22nd St., La Crosse, Wis.
Ciemielewski, Wanda M. (45)
3409 Bethoven St., Pittsburgh 19, Pa.
Ciminera, Joseph L. (38)
136 N. Wells Ave., Glenolden, Pa.
Cimino, Peter S. (43)
c/o Eagle Drug Co., 1709 N. Howard Ave., Tampa 7, Fla.
Ciofli, Nicholas J. (48)
72 Morris Ave., Long Branch, N. J.
Ciofli, Agnes S. (49)
590 E. 118th St., Cleveland 8, Ohio.
Cipriany, Louis C. (49)
925 S. 55th St., Philadelphia 43, Pa.
Clady, Willard A. (46)
111 S. Sandusky Ave., Bucyrus Ohio.
Claflin, Albert W. (43)
180 Medway St., Providence, R. I.
Clampitt, Geo. W. (43)
510—23rd St., Galveston, Tex.
Clancy, Roy J. (48)
3944 W. 50th St., Minneapolis 10, Minn.
CLAPP, LOWELL T. (05)
59 Evans Rd., Brookline, Mass.
Clark, Albert E. (25)
The Mu-Col Co., Inc., 156–58 E. Tupper St., Buffalo 3, N. Y.
Clark, Blanch B. (45)
c/o Dr. Henry T. Clark, Jr., Dir., Vanderbilt University Hospital, Nashville, Tenn.
Clark, Catherine H. (49)
Campo Creole Jusepin, Maturin, Edo., Monagas, Venezuela, S. A.
Clark, Cecil W. (49)
5365 Washington Blvd., Indianapolis 20, Ind.
Clark, Elizabeth. A. (46)
317 Harllee St., Marion, S. C.
Clark, Esther I. (43)
759 Chestnut St., Springfield 7, Mass.
Clark, Frederic (48)
1301 Broadway, Lubbock, Tex.
Clark, Guy W. (28)
Lederle Laboratories Div., American Cyanamid Co., Pearl River, N. Y.
Clark, Harlo A. (48)
175 Broadway, Long Branch, N. J.
Clark, Harold F. (47)
110 Maryland Ave., N. E., Washington 2, D. C.
Clark, Harry E. (49)
19 Van Buren St., Dolgeville, N. Y.
Clark, Hubert F. (24)
27 Darte Ave., Carbondale, Pa.
Clark, John C. (47)
736 Notre Dame, Grosse Pointe 30, Mich.
Clark, John D. (47)
1737 Menlo Way, Klamath Falls, Oreg.
Clark, John M. (47)
Springfield, S. C.
Clark, John W. M. (47)
479 Main, Athol, Mass.
Clark, M. P. M. (41)
Caixa Postal 180, Rio de Janeiro, Brazil, S. A.
CLARK, RALPH W. (22)
Univ. of Oklahoma, School of Pharmacy, Norman, Okla.
Clark, Shirley I. (49)
Clark Heights, Pleasant Valley, N. Y.
Clark, William A. (47)
170 Main St., Annapolis, Md.
Clark, William W. (47)
874 Ensenada Ave., Berkeley 7, Calif.
Clarke, B. L., (45)
Merck & Co., Inc., Rahway, N. J.
Clarke, Donald A. (39)
525 E. 68th St., New York 21, N. Y.
Clarke, Graham C. (42)
3539-B S. Stafford St., Arlington, Va.
Clarke, Julious F., Jr. (48)
122 Nueva Ave., Redwood City, Calif.
Clarke, L. J. (45)
Nyal Drug Store, Marked Tree, Ark.
Clarke, Noble H. (49)
323 Franck Ave., Louisville 6, Ky.
Clateman, Irwin (47)
621 W. Newton Ave., Greensburg, Pa.
Claus, Edward P. (30)
Univ. of Pittsburgh, School of Pharmacy, 1431 Blvd. of the Allies, Pittsburgh, Pa.
Claus, Malcolm F. (49)
6919 Louis XIV, New Orleans, La.
Clauss, Charles G. (46)
Box 92, Oakdale, La.
Clawson, Rennie J. (48)
2020 Adoline Ave., Fresno, Calif.
Claxton, Lee Roy (49)
108 W. Oak St., Griffin, Ga.
Clay, Andrew Ruggles (46)
Hallock, Minn.
CLAYTON, CHARLES J. (05)
1441 Welton St., Denver 2, Colo.
Clayton, John D. (45)
2512 W. Koenig St. Grand Island, Nebr.
Clayton, John W. (47)
809 W. Monroe St., Johnston City, Ill.
Clayton, William G. (47)
1422 West Division, Grand Island, Nebr.
Cleary, Peter J. (47)
2834 N. Hackett Ave., Milwaukee 11, Wis.
Cleary, Robert J. (47)
1124½ Belknap St., Superior, Wis.
Clegg, Robert J. (48)
214 N. Logan St., Lansing, Mich.
Clement, N. Clark (34)
61 Brook St., Wellesley, Mass.
Clemente, Louis V. (45)
6811 Alderton St., Forest Hills, L. I., N. Y.
Clements, Fred W. (43)
International Labs., Inc., 26 Forbes St., Rochester 11, N. Y.
Clere, Melvin (48)
1516 S. Euclid Ave., San Gabriel, Calif.
Cleveland, Harold V. (46)
23 N. Genesee St., Waukegan, Ill.
Clevenger, Jewell D., Jr. (47)
726 S. Hampton, Springfield, Mo.
Clifford, Mabel B. (44)
Bethel, Vt.
Clifford, Robert W. (48)
1076 El Camino, Menlo Park, Calif.
Clinard, George W. (47)
117 N. Main St., Springfield, Tenn.
Cline, F. Herman (44)
332 N. Tryon St., Box 1534, Charlotte 1, N. C.
Cline, H. H. (49)
6713 E. Lewis, Wichita 15, Kans.
Clinton, S. O. (31)
106 N. Main St., Butte, Mont.
Clone, Earl R. (43)
2223 W. 12th St. Los Angeles 6, Calif.
Close, Harold R. (47)
Box 188, Sudan, Tex.
Closs, John O'Neill (41)
The Tilden Co., New Lebanon, N.Y.
Closset, Albert L. (48)
Rue Hullos 8, Liege, Belgium.
Clouse, Reynold R. (44)
1510 N. 11th, Reading, Pa.
Cluff, Vearl (41)
Pima, Ariz.
Clukay, Bertram (46)
8 Grove, Peterborough, N. H.
Clymer, Harold A. (41)
Grove Ave., Southampton, Pa.
Coan, Chester C. (49)
18 E. Washington, Greencastle, Ind.
Cobb, Henry L. (45)
York, Ala.
Cobb, Thomas E. (47)
2400 Warrior Rd., Birmingham 8, Ala.
Cobb, William T. (47)
Williford Pharmacy, Camilla, Ga.
Cobe, Herbert M. (46)
3223 N. Broad St., Philadelphia 40, Pa.
Coburn, Thelma M. (42)
403 Thomas Jefferson Hotel, Birmingham 3, Ala.
Coby, James B. (47)
1846 Holman, Covington, Ky.
Coca, Carlos D. (49)
Box 6, Luquillo, Puerto Rico.
Cocke, George B. (40)
Center St., Manassas, Va.
Cockrell, Alfrieda Z. (37)
19 N. Cordova, Alhambra, Calif.
Coco, Albert M. (45)
651 Lincoln Ave., Orange, N. J.
Coco, Angelo (48)
2148 E. 1st St., Brooklyn 23, N. Y.
Coco, Onofrio J. (45)
Inwood Pharmacy, 180 Mott Ave., Inwood, L. I., N. Y.
Codiga, Al (48)
Laurel & San Carlos, San Carlos, Calif.
Coe, Allan J. (46)
704 S. Glenwood Ave., Sprinfield, Ill.
Coe, E. G. (46)
Hastings, Fla.
Coerver, Paul G. (47)
5463 Cabanne Ave., St. Louis 12, Mo.
Coffey, Maryrose (44)
42 LaFoye St., Brockton, Mass.
Coffield, Martha B. (48)
937 Juniper St., N. E., Atlanta, Ga.
Coffin, Sherwood (44)
Route 1, Box 48, Kenwood, Calif.
Coffman, Frank H. (48)
360 Hickman St., Clarksburg, W. Va.
Coffman, Lloyd E. (49)
220 W. Palm, Roodhouse, Ill.
Coger, C. W. (47)
16607 Bellflower Blvd., Bellflower, Calif.
Coghill, Marjorie L. (43)
701 Prospect Ave., Lake Bluff, Ill.
Coghlan, Charles E. (47)
2746 S. Logan Ave., Milwaukee 7, Wis.
Cohen, Abraham (43)
199 Sheridan Ave., Roselle, N. J.
Cohen, Abraham H. (44)
374 Whitney Ave., New Haven Conn.
Cohen, Alexander (47)
618 W. 164th St., New York 32, N. Y.
Cohen, Alfred J. (46)
314 Main St., Irwin, Pa.
Cohen, Benjamin M. (44)
1942 Hennepin Ave., Minneapolis, Minn.
Cohen, David (46)
596 Gross St., Malden, Mass.
Cohen, David I. (44)
9 Gifford Ave., Jersey City, N. J.
Cohen, Eugene L. (41)
1355 N. Front St., Philadelphia 22, Pa.
Cohen, Harry (45)
18625 Wisconsin, Detroit 21, Mich.
Cohen, Herbert B. (46)
547 Howard Ave., Brooklyn 12, N. Y.
Cohen, Jack (45)
235 Lindbergh Dr., N. E., Atlanta, Ga.
Cohen, Joseph (39)
P. O. Box 25, Cicero, Ill.
Cohen, Nathan Y. (49)
708 Canton St., Elizabeth, N. J.
Cohen, William (48)
175 Saratoga Ave., Brooklyn, N. Y.

Cohen, Yale J. (47)
3216 Payne Ave., Cleveland, Ohio.
Cohn, Harry A. (49)
11325 Euclid Ave., Cleveland 6, Ohio.
Cohn, Joseph (47)
508 Logan Blvd., Altoona, Pa.
Colacurcio, D. A. (46)
52 Dwight St., Jersey City 5, N. J.
Colbert, Charles E. (47)
28 E. Third Ave., Spokane 10, Wash.
Colborn, Theodora E. (45)
153 William St., East Orange, N. J.
Colby, Amos B. (47)
Ohio State University, Coll. of Pharmacy, Columbus 10, Ohio.
Cole, Barzillai, L. (25)
c/o Cole Chemical Co., 3727 Laclede Ave., St. Louis, Mo.
COLE, BESS OLIVE (15)
School of Pharmacy, Univ. of Maryland, Baltimore, Md.
Cole, Burr R. (47)
8228 Geary Blvd., San Francisco 21, Calif.
Cole, Francis, B. (46)
1961 Boulevard, West Hartford 7, Conn.
Cole, Jack K. (44)
26 E. Tallmadge Ave., Akron 10, Ohio.
Cole, Lorene J. (49)
277 Troup St., Rochester 8, N. Y.
Cole, Paul F. (42)
Receiving Hospital, 1326 St. Antoine St., Detroit 26, Mich.
Cole, Roger R. (49)
237 Mercer, Decatur, Ind.
Cole, Roland (49)
1645 W. Genesee St., Syracuse 4, N. Y.
Cole, T. A. (49)
148 Laida, Ashland, Oreg.
Coleman, Charles S. (48)
2940 S. Jennings, Fort Worth, Tex.
Coleman, Charlotte R. (45)
John Sealy Hospital, Galveston, Tex.
Coleman, Daniel D. (47)
1507 Vance Ave., Chattanooga, Tenn.
Coleman, Fred W. (43)
12 Union Sq., Milford, N. H.
Coleman, George W. (47)
1361 Memorial Dr., S. E., Atlanta, Ga.
Coleman, Henry O. (46)
2114 Broadway Ave., Pittsburgh 16, Pa.
Coleman, John E. (49)
1620 Beach Dr., Panama City, Fla.
Coleman, Mary Ann (49)
1404 Eutaw Pl., Baltimore 17, Md.
Coleman, William S. (43)
Lewisburg, W. Va.
Coley, Charles W. (49)
196 E. Jackson St., Milan, Tenn.
COLIN, G. G. (26)
3 a Guerrero No. 74, Mexico, D. F.
Coll, Lucien A. (43)
927 Clay St., Manchester, N. H.
Coll, Ruth M. (47)
208 7th Ave., Carnegie, Pa.
Colleck, M. Barney (47)
2182 Kingston Rd., Scarbaro Bluffs, Ont., Canada.
Colleck, Sam. N. (49)
948 Windermer Rd., Windsor, Ont., Canada.
Collette, Allan (47)
3436 Overbrooke Lane, Houston 19, Tex.
Collier, Dorothy E. (49)
7405 Quincy Ave., Cleveland 4, Ohio.
Collier, Halcyone B. (49)
44 White Pine Dr., Asheville, N. C.
Colliere, Raymond (37)
Establecimientos Chilenos Colliere, Ltda., Calle Las Rosas No. 1352, Santiago, Chile, S. A.
Collin, Agnold (46),
Botica Internacional, Apt. 1292, Guayaquil, Ecuador, S. A.
Collins, C. M. (44)
445 South, Toledo, Ohio.
Collins, Catharine F. (49)
3260 N. E. Irving, Portland 13, Oreg.
Collins, Edward F. (46)
351 Demarest Ave., Closter, N. J.
Collins, Galen F. (49)
215 S. Chauncey, West Lafayette, Ind.
COLLINS, GEORGE W. (11)
8147 S. Ingleside Ave., Chicago 19, Ill.
Collins, Harry P. (48)
Forsyth, Mont.
Collins, John G. (45)
Tolleson, Ariz.
Collins, Joseph W. (48)
414 Winburn Dr., East Point, Ga.
Collins, Lisle D. (47)
9236 W. North Ave., Wauwatosa 13, Wis.
Collins, Thomas P. (49)
2804 Fairfield Ave., Bridgeport 5, Conn.
Collins, Vander L. (49)
Albany, Ky.
Collinsworth, Evan T. (47)
2834 E. Magnolia Ave., Knoxville 15, Tenn.
Colsky, Oscar (40)
950 North Pkwy., Memphis 7, Tenn.
Colson, Henry C., Jr. (33)
c/o C. W. Carnrick Co., 20 Mt. Pleasant Ave., Newark, N. J.
Colt, James W. (48)
45 Glendale Pl. Buffalo 8, N. Y.
Colucci, Joe (49)
2016 S. Colorado St., Philadelphia 45, Pa.
Colunga, Jose S. (48)
Modern Pharmacy, Nogales, Ariz.
Colville, Eugene E. (46)
1316 N. Francis, Apt. 3, Oklahoma City, Okla.
Comess, Marvin (44)
4753 N. Spaulding Ave., Chicago 25, Ill.
Comm, Clifford Otto (44)
323 Virginia Ave., Chester, W. Va.
Comstock, Royal R. (46)
4125 N. 24th Pl., Milwaukee 9, Wis.
Concha, Jesusa A. (49)
312 N. Carroll, Madison, Wis.
Conerly, Jean (48)
Jackson, Ala.
Coniglio, Francis J. (45)
Anthony & Abbott Pharmacy, 155 E. Ferry St., Buffalo, N. Y.
Coniglio, Frank L. (32)
O'Brien Drug Store, 1015 Swann Ave., Tampa, Fla.
Conklin, Kenneth B. (46)
934 W. 256 St., Wilmington, Calif.
Conklin, Roscoe L. (47)
Lake Ronkonkoma, N. Y.
Conley, Bernard E. (47)
341 Sylvan Rd., Lake Bluff, Ill.
Conley, R. E. (45)
Route 1, Batavia, Ill.
Conn, Elmer G. (45)
1000 Macdonald Ave., Richmond, Calif.
Connally, Charles A. (48)
98 Westminister Drive, N. E., Atlanta, Ga.
Connell, Bruce F. (47)
1419 N. 25th St., Birmingham, Ala.
Connell, Robert F. (45)
Mt. Auburn Hospital, Cambridge, Mass.
Connelly, Mary W. (48)
6407 Liberty Heights Ave., Baltimore 7, Md.
Conney, Leo Y. (46)
736 Elm St., Winnetka, Ill.
Connolly, Joseph A. (48)
1020 Fifth Ave., East McKeesport, Pa.
Connor, Charles M. (47)
3030 Altura Blvd., El Paso, Tex.
Connor, Patrick J. (49)
515 City National Bank Bldg., Omaha, Nebr.
Conrad, Lester I. (43)
Box 111, Milltown, N. J.
Conroy, Joseph R. (46)
1539 State Ave., Corapolis, Pa.
Conroy, Peter J. (29)
410 Scarsdale Rd., Tuckahoe 7, N. Y.
Constantine, Lester S. (48)
1200 Passmore St., Philadelphia 11, Pa.
Constine, John H. (43)
8401 Germantown Ave., Philadelphia 18, Pa.
Conte, Felix A. (48)
745 Sycamore Ave., San Bruno, Calif.
Contes, William E. (49)
969 Liberty Ave., Pittsburgh 22, Pa.
Conti, Frank W. (49)
1996 W. 6th St., Brooklyn 23, N. Y.
Contzen, Guillermo (49)
Barros Luco 3078, Santiago, Chile, S. A.
Converse, Amasa B. (48)
P. O. Box 194, Diablo Heights, Canal Zone.
Conway, Gerald E. (46)
108 N. Edward, Worthington, Ind.
Conwell, Kenneth L. (46)
1022 N. Madison, Wichita, Kans.
Cook, Alex M. (47)
South Side Pharmacy, Inc., Broad-Way & Edgewood, Macon, Ga.
COOK, ALFRED P. (02)
79 Park St., Portland, Me.
Cook, Charles R. (47)
207 N. Wayne St., North Manchester, Ind.
Cook, Donald L. (43)
6420 N. Olcott Ave., Chicago 31, Ill.
COOK, E. FULLERTON (01)
4738 Kingsessing Ave., Philadelphia 43, Pa.
Cook, Eleanor J. (43)
5 Manor Pl., Charlston 1, W. Va.
Cook, Elton S. (40)
1840 Madison Rd., Cincinnati, Ohio.
Cook, Harry H. (46)
Norfolk, Conn.
Cook, Louise W. (46)
1836 South Ave., LaCrosse, Wis.
Cook, Ross A. (47)
Bennett Drug Store, 124 N. 29th St., Billings, Mont.
COOK, ROY B. (24)
5 Manor Pl., Charleston, W. Va.
Cooke, Betty Lee (47)
313 Elk Ave., Elizabethton, Tenn.
Cooke, John E. (45)
c/o Maritime College of Pharmacy, College St., Halifax, Nova Scotia, Canada.
Cool, Harold N. (46)
9349 Venice Blvd., Culver City, Calif.
Cooley, Leon R. (46)
3630 Hazelhurst Ave., Toledo, Ohio.
Cooley, Russell A. (47)
150 S. Madison Ave., Pasadena 5, Calif.
Coombs, Ruby E. (48)
921 State St., Santa Barbara, Calif.
Coon, Clifford E. (49)
Sheridan, Oreg.
Coon, Lyle (49)
125 N. Erie, Wichita 8, Kans.
Coons, Elsie M. (47)
5431 Forest, Kansas City 4, Mo.
Cooper, Carolyn C. (47)
520 Washington, W., Fayetteville, Tenn.
Cooper, Chauncey I. (46)
Howard Univ., Washington 1, D. C.
Cooper, Gerald J. (45)
1118—3rd St., Ames, Iowa.
Cooper, Jack (47)
11 Iris Rd., Summit, N. J.
Cooper, Lillian E. (49)
49 Ripley Pl., Buffalo 13, N. Y.
Cooper, M. L. (42)
700 W. North Ave., Baltimore 17, Md.
Cooper, Patricia A. (48)
Levy Drug Co., Front & St. Denis, Natchitoches, La.
Cooper, W. A. (48)
1665 Oneida St., Utica, N. Y.
Cooper, Walter T. (47)
236 Nichols Ave., Brooklyn 8, N. Y.
COOPER, ZADA MARY (09)
102 N. 5th Ave., Villisca, Iowa.
Cooperman, Leon (45)
1909—46th St., Camden, N. J.
Coorsh, Anita (45)
501 S. Limestone St., Apt. 8, Springfield, Ohio.
Coover, Doris J. (46)
R. D. 4, York, Pa.
Cope, L. M. (49)
1961 Germantown Ave., Philadelphia 22, Pa.
Copeland, Kern H. (46)
6701 S. Normandie, Los Angeles 44, Calif.
Copeland, William F. (42)
1210 Fifth Ave., San Diego, Calif.
Copello, Vincent (47)
121 Main St., Little Ferry, N. J.

Copley, D. M. (40)
5 Francis Ave., Norwich, N. Y.
Coratolo, Vincent M. (44)
22 Bay 19 St., Brooklyn 19, N. Y.
Corbin, Edward N. (41)
4805—41st St., N. W., Washington 16, D. C.
Corbin, Maurice W. (45)
201 Main St., Worcester 8, Mass.
Corbin, Patricia A. (43)
3010 N. Ainsworth St., Portland 11, Oreg.
Cordano, Wm. G. H. (47)
2901 Woodburn Ave., Cincinnati 6, Ohio.
Cordasco, Carl (48)
62 N. 11th St., Newark 7, N. J.
Cordiner, H. H. (44)
Box 36, Laramie, Wyo.
Cordle, Harry J. (46)
Rm. 2160, 120 Broadway, New York 5, N. Y.
Corey, A. T. (49)
104 Holt Ave., Barbourville, Ky.
Corey, Luther M. (49)
c/o Lee Drug Co., Harlan, Ky.
Corgan, Bert C. (42)
3401 Franklin St., Denver, Colo.
Corman, Morton S. (49)
916 W. Wyoming Ave., Philadelphia, Pa.
Corn, Charles (49)
2200 Collins Ave., Miami Beach 40, Fla.
Cornell, Edwin, H. J. (48)
1056 Dewey Ave., Rochester, N. Y.
Cornes, George A. (49)
Route 1, Box 170, Nehalem, Oreg.
Cornet, Isadore (47)
547 E. 178th St., Bronx 57, N. Y.
Cornfeld, Harry G. (29)
907 Clifton Ave., Collingdale, Pa.
Cornwell, Floyd M. (43)
701 Main St., Webster, S. Dak.
Cornwell, Ralph M. (47)
Ankeny, Iowa.
Corontzes, Harry N. (49)
49 Beaufain, Charleston, S. C.
Corp, Clarence H. (47)
141 State St., Augurn, N. Y.
Corrao, Nelson E. (46)
20 Mine-Brook Rd., Bernardsville, N. J.
Corring, George F., Jr. (46)
P. O. Box 177, Coytesville, N. J.
Corsello, Helena R. (46)
3712 Brighton Rd., Pittsburgh 12, Pa.
Cortesi, Rudolph (44)
5 Fulton St., Worcester 8, Mass.
Coryell, Robert E. (47)
9742 Greenwood, Chicago 28, Ill.
Cosgrove, Frank P. (45)
7332 Jeannett Pl., New Orleans, La.
Cosgrove, John F. (34)
315 Ridge St., Newark 4, N. J.
Cosler, Robert L. (46)
2200 N. Main St., Dayton 5, Ohio.
Cosloy, Burton (46)
1107 E. Windsor Rd., Glendale 8, Calif.
Costa, Max A. (46)
19430 Gainsborough Rd., Detroit 23, Mich.
Costa, William J. (49)
6 Baldwin Ave., Ridley Park, Pa.
Costabile, Frank (42)
302½ Atwells Ave., Providence, R. I.
Costabile, Hugo (46)
4200 White Plains Ave., New York 66, N. Y.
Costanzo, Vincent A. Jr. (48)
8160 S. Ellis, Chicago 19, Ill.
Costello, Christopher H. (41)
271 Western Ave., Lynn, Mass.
Costello, Curtis B. (44)
c/o French Drug Store, Lakefield, Minn.
COSTELLO, PATRICK H. (23)
77 W. Washington St., Suite 404, Chicago 2, Ill.
Costenbader, Fred D. (44)
310 Delaware Ave., Palmerton, Pa.
Cote, Marcel (48)
43 Ave. Bourlamaque, Quebec, P. Q., Canada.
Cotter, John J. (46)
110—5th St., Atlanta, Ga.
Cottone, Faro W. (47)
73 Main St., Lodi, N. J.
Couch, Cedric (47)
8008 Brush, Detroit 2, Mich.
Couch, Ralph N. (48)
c/o Schering Corp., 2 Broad St., Bloomfield, N. J.
Coulson, Royce H. (47)
Newell, Iowa.
Counts, C. R. (38)
Commercial St., Ozark, Ark.
Counts, D. Reed (45)
Groseclose, Va.
Counts, John F. (46)
1527 Washington St., E., Charleston 1, W. Va.
Countzler, George E. (49)
Greenville, Ky.
Courtney, James E. (47)
2009 W. F St., Napa, Calif.
Courtney, John W., Jr. (37)
5834 Jefferson Ave., Newport News, Va.
Coury, Edward N. (49)
722 N. Rebecca St., Scranton 4, Pa.
Cousins, Walter, Jr. (45)
516 Browder, Dallas 1, Tex.
Coutsouris, Helen C. (45)
722 Balboa St., San Francisco 19, Calif.
Cover, Harry L., Jr. (46)
838 Lowerline St., Apt. 11, New Orleans 18, La.
Covey, George D. (48)
1165 Talbotton Rd., Columbus, Ga.
Cowan, George A. (45)
Greenville General Hospital, Greenville, S. C.
Cowan, Nydia F. (47)
910 La Salle St., Jacksonville, Fla.
Cowan, Philip E. (46)
210 Highland Ave., Highland Park 3, Mich.
Coward, Richard H. (44)
135 E. Woodruff Ave., Columbus 1, Ohio.
Cowell, Verne W. (34)
1428 Cedar Ave., El Monte, Calif.
Cowles, Russell A. (42)
920 Henry St., Detroit 1, Mich.
Cowley, Benjamin C. (40)
3 Winter St., Box 947, Worcester, Mass.
Cowsert, Hugh I. (46)
Goodman, Miss.
Cox, Alvin C. (45)
9 Commerce St., West Point, Miss.
Cox, Charlotte (45)
11100 Euclid Ave., Cleveland, Ohio.
COX, CYRUS L. (19)
N. J. Coll. of Pharmacy, Broadway & Lincoln Ave., Newark, N. J.
Cox, J. Roger (46)
20 N. Warren Ave., Woodbury, N. J.
Cox, Louis W. (44)
919—6th Ave., De Witt, Iowa.
Cox, Malcolm W. (47)
280 Trent Rd., Philadelphia 31, Pa.
Coy, William H. (46)
Route 1, Danville, Ind.
Coyle, Howard (49)
430 Diversey, Chicago 14, Ill.
Coyne, Genevieve R. (49)
107 S. Main St., Old Forge, Pa.
Coyner, Vance T. (49)
858 Wall, Bend, Oreg.
Cracolice, Salvatore M. (48)
Milpitas Drug Co., Milpitas, Calif.
Craddock, Francis E. (41)
51 Vinal Ave., Barre, Vt.
Craft, Preston R. (49)
107 W. 7th St., Junction City, Kans.
Craggs, H. B. (44)
503 Shoup Ave., Idaho Falls, Idaho.
Craig, Henry (49)
1044 West 84th St., Chicago 20, Ill.
Craig, Hugh (40)
59 John St., New York, N. Y.
Craig, William E. (48)
Route 1, Box 6, East Laurens, S. C.
Craighead, E. F. (49)
V. A. Hospital, Alexandria, La.
Craighead, Warren R. (48)
1616—16th St., Woodward, Okla.
Cralego, Joseph A. (46)
538 Michigan Blvd., Pasadena 10, Calif.
Crall, Harold (46)
4942 Laclede, St. Louis 8, Mo.
Crall, Merritt (47)
Box 96, Jonesboro, Ark.
Cramer, Harold D. (41)
671 W. Broad St., Columbus, Ohio.
Cramer, Margaret H. (49)
2122 Bryant Ave., New York 60, N. Y.
Cramer, Richard E. (49)
319 Trenton Ave., Point Pleasant, N. J.
Cramer, Robert H. (46)
2306 Pacific, Manhattan Beach, Calif.
Crampton, James M. (47)
725 N. Spring, Souix Falls, S. Dak.
Crandall, Douglas W. (46)
Main St., Mexico, N. Y.
Crandall, Ernest R. (20)
Wayne University, Coll. of Pharmacy, 625 Mullett St., Detroit, Mich.
Crandall, J. Verne (28)
8903 Mendota Ave., Detroit 4, Mich.
Cranford, James C. (48)
Kingsland, Ga.
Cranford, Luther J. (49)
1208—11th St., Galena Park, Tex.
Cravens, Edward H., Jr. (44)
Veterans Facility, Tuskegee, Ala.
Cravens, James A. (49)
15119 Huston St., Van Nuys, Calif.
Craw, R. O. (46)
B.B. 1110, c/o Irwin-Neisler Co., Decatur, Ill.
Crawford, Samuel D. (47)
1810 Newport Blvd., Costa Mesa, Calif.
Crawford, Thomas G. (45)
744 E. Bowen, Chicago 15, Ill.
Crawford, Walter W. (46)
131 Shell, Harrisburg, Pa.
Creasy, William N. (49)
48 Scarsdale Rd., Tuckahoe 7, N. Y.
Creighton, John P. (48)
1201 Geneva Ave., San Francisco 12, Calif.
Crenshaw, Clarence A. (49)
Route 2, Gainesville, Ga.
Creutz, Robert J. (48)
Wausa, Nebr.
Crews, Lester T. (48)
Venus, Fla.
Crews, Theodore T. (40)
159 Forrest Ave., N. E., Atlanta, Ga.
Crichton, Patrick V. (48)
415 Buena Vista Ave., San Francisco 17, Calif.
Cripe, Wilma W. (49)
815 N. E. Going, Portland 11, Oreg.
Crippen, Arthur E. (41)
Box 61, 217 N. Main St., Ann Arbor, Mich.
Crisalli, Joseph P. (45)
420 Clinton St., Brooklyn 31, N. Y.
Crisp, Betty M., Jr. (49)
430 Beach St., Ashland, Oreg.
Crispin, Harvey G. (45)
2201 Cottage Grove Ave., Des Moines, Iowa.
Crissman, Herbert S. (47)
Ipswich, S. Dak.
Criswell, Thomas F., Jr. (40)
4414th AB Sq. SAC, Bergstrom AFB, Austin, Tex.
Crocker, Douglas L. (47)
Luck, Wis.
Crockett, Jack O. (46)
Greenland Pharmacy, 4130 Gallatin Rd., Nashville 6, Tenn.
Crockett, Marion S. (44)
Modern Pharmacy, 706 Bernard St., Bakersfield, Calif.
Cronan, Thomas L. (46)
962 Keed Ave., Baton Rouge, La.
Cronfeld, Norman (48)
304 E. Roosevelt Blvd., Philadelphia, Pa.
Cronheim, George E. (43)
S. E. Massengill Co., Bristol, Tenn.
Cronk, Dale H. (46)
R. F. D. 1, Iowa Falls, Iowa.
Crook, Sharon (49)
541—23rd St., Ogden, Utah.
Crooks, Harold (33)
99-45—67th Rd., Apt. 309, Forrest Hills, L. I., N. Y.
CROSBY, CHARLES C. (23)
Buhl, Minn.
Crosby, Justin D. (49)
418 N. Main St., Piqua, Ohio.
Crosby, L. S. (36)
1309 Georgina Ave., Santa Monica, Calif.
Crosby, Philip A. (48)
1155 W. Badillo Ave., Covina, Calif.
Crosier, Harold E. (45)
52 Bridge St., Shelburne Falls, Mass.
Croslin, Richard B. (49)
470—16th St., San Bernardino, Calif.

Cross, Forest W. (41)
T. B. Div., Federal Security Bldg S., Rm. 5409, Washington 25, D. C.
Cross, Irwin (49)
1133 Morvenwood Rd., Jacksonville, Fla.
Cross, Jack L. (47)
9328 Aster Ave., Affton, Mo.
Cross, John M. (39)
1125 E. 7th St., Plainfield, N. J.
Crossen, George E. (34)
School of Pharmacy, Oregon State College, Corvallis, Oreg.
Crosson, Hugh S. (49)
1424 Avondale Ave., Jacksonville 5, Fla.
Crosson, W. B. (49)
McKesson & Robbins, 831 Castro St., Oakland 4, Calif.
Crotty, Frank R. (48)
106 High St., Clinton, Mass.
Crotty, Melvin W. (47)
Murphy General Hospital, Waltham, Mass.
Crotwell, Miss Johnnie M. (47)
Druid City Hospital, Tuscaloosa, Ala.
Crouch, Ernest (49)
Crouch Drug Store, McMinnville, Tenn.
Crouch, William T. (49)
123 E. Washington St., Quincy, Fla.
Croumey, Edward F. (46)
19 Fountain St., Bangor, Maine.
Crouse, George F. (25)
Smithton, Pa.
Crow, Esther M. (48)
Haxtun, Colo.
Crowder, Myles J. (49)
314 Temple St., Beckley, W. Va.
Crowe, David F. (46)
3400 Danbury Rd., Richmond 24, Va.
Crowe, Robert L. (36)
874 Union Ave., Memphis, Tenn.
Crowley, Leona (46)
Arnold, Nebr.
Crown, Bernard (47)
1018 Portland St., Pittsburgh 6, Pa.
Crozier, John A. (46)
106 W. Redwood St., Baltimore 1, Md.
Crum, Ray R. (44)
Crum's Pharmacy, Hysham, Mont.
Crump, John D. (46)
Box 938, Macon, Ga.
Cuadros, Ana Maria (48)
Presbyterian Hospital, Ashford Ave. Stop 46½, Santurce, Puerto Rico.
Cudzik, Frank J. (48)
1111 Orchard Way, Brackenridge, Pa.
Culbertson, William F. (47)
Madill, Okla.
Cullen, Frederick J. (44)
810—18th St., N. W., Washington 6, D. C.
Cullen, William B. (48)
4658 Norma Dr., R. D. 10, Pittsburgh 27, Pa.
Culley, James P. (47)
517 Porter St., Cleves, Ohio.
CULLEY, JOHN (46)
672—26th St., Ogden, Utah.
Cullinan, Ralph (47)
4571 Lanterman Rd., Youngstown 9, Ohio.
Culter, Samuel H. (49)
107 W. Vine, Kalamazoo 32, Mich.
CULVER, HARRY E. (23)
Middletown, Del.
Cumberland, Warren E. (47)
7501 E. Washington St., Indianapolis 1, Ind.
Cummings, J. A. (46)
Box 8834, Pittsburgh 21, Pa.
Cummins, Charles V. (41)
Chrisman, Ill.
Cummins, John T. (35)
1660 Neil Ave., Columbus, Ohio.
Cuneo, Michael (45)
79 West Portal Ave., San Franciso, Calif.
Cunning, V. A. (42)
Cunning Drug Co., Corona, Calif.
Cunningham, Ann (44)
214—10th St., Toledo 2, Ohio.
Cunningham, George H. (42)
5132 Sepulveda, San Bernardino, Calif.
Cunningham, George K. (44)
214—10th St., Toledo 2, Ohio.
Cunningham, Gerald W. (49)
Guernsey, Wyo.
Cunningham, Louise F. (48)
601 Brockway Ave., Morgantown, W. Va.
Cunningham, Milton H. (45)
236 Stockton St., Hightstown, N. J.
Cunningham, Raymond W. (46)
Lederle Laboratories Div., Pearl River, N. Y.
Cunningham, Vernette E. (47)
1142 McKinley Ave., Apt. 10, Oakland 10, Calif.
Cunov, Carl H. (45)
11414 Hartwell St., Detroit, Mich.
Cupps, James Hundley (45)
2759 Girard Ave., Evanston, Ill.
Curchack, Irving B. (46)
16 Chittenden Ave., New York 6, N. Y.
Cureton, Eugene (46)
3239—138th St., Toledo 11, Ohio.
Curinga, Guy A. (47)
523—4th St., Clairton, Pa.
Curley, Thomas B. (45)
6507 W. Wisconsin Ave., Milwaukee, Wis.
Curry, Dale M. (47)
342 N. 12th St., Corvallis, Oreg.
Curry, Gordon L. (26)
Univ. of Ky. Pharmacy Coll., 104 W. Chestnut, Louisville 2, Ky.
Curry, William (46)
229 Kingsway Dr., Lexington, Ky.
Curtain, W. U. (44)
528 S. Boulder, Tulsa, Okla.
Curtin, Geo. D. (45)
975 Main St., Walpole, Mass.
Curtis, Charles W. (47)
1825 Del Paso Blvd., North Sacramento 15, Calif.
Curtis, Clifton R. (43)
Curtis Laboratories, Brookfield, N. Y.
Curtiss, Charlotte (46)
1118 E. 111th St., Cleveland, Ohio.
Curts, George D. (49)
5340 Charlotte, Kansas City 4, Mo.
Cushon, Robert N. (46)
10979 Ocean Park Ave., Los Angeles 34, Calif.
Cusick, John (44)
411 S. Main St., Fall River, Mass.
Cusick, William P. (45)
Control Dept., Parke Davis & Co., Detroit, Mich.
Cusumano, Frank R. (48)
9 N. Eutaw St., Baltimore 1, Md.
Cusimano, Santo (49)
97—4th Ave., Brooklyn 17, N. Y.
Cutler, Jennie (45)
102 Orange St., Newark 2, N. J.
Cutler, Nathan (48)
2821 W. Girard Ave., Philadelphia 30, Pa.
Cutler, Samuel (47)
175 W. Englewood Ave., West Englewood, N. J.
Cutter, Edward A., Jr. (48)
Cutter Laboratories, Berkeley 1, Calif.
Cutting, Clarence E. (26)
273 Main St., Huntington, N. Y.
Cvopa, Bernard A. (48)
1615 W. Monroe St., Evanston, Ill.
Cwalina, Gustav E. (38)
School of Pharmacy, Purdue University, West Lafayette, Ind.
Cygiel, John G. (46)
Winter General Hospital, Topeka, Kan.
Cyr, Gilman N. (43)
Mass. College of Pharmacy, 179 Longwood Ave., Boston 15, Mass.
Czachorski, Roman A. (41)
3734 N. Saginaw St., Flint, Mich.
Czarnecki, Edward J. (47)
2713 S. 43rd St., Milwaukee 7, Wis.
Czepnik, Clara (48)
649 W. Warren, Detroit 1, Mich.
Czerwinski, Clement (49)
3279 N. Holton St., Milwaukee, Wis.

## D

Dabovich, Thomas C. (39)
1127 W. Edgeware Rd., Los Angeles 26, Calif.
Daggett, C. P. (47)
Box 1639, Houston, Tex.
Daglish, Cyril (43)
c/o Research Laboratories, A. Wander Ltd., King's Langley, Hertfordshire, England.
Dahl, Elmer V. (47)
427 Beirut Ave., Pacific Palisades, Calif.
Dahl, Paul A. (47)
124 S. Main St., Viroqua, Wis.
Dahl, Roland J. (45)
745—5th Ave., New York 22, N. Y.
Dahl, Warren D. (47)
5324 Zenith Ave., S., Minneapolis 10, Minn.
Daigle, Jean P. (48)
29 Essex, Lowell, Mass.
Daigle, Lloyd J. (46)
2472 Verbena St., New Orleans, La.
Daigle, Robert J. (47)
State Sanatorium, Wallum Lake, R. I.
Dailey, Millord H. (49)
201 E. 61st St., Chicago 37, Ill.
Daily, George Earl (45)
Route 2, Box 164, Pineville, La.
Dakelman, Louis (47)
229 Raritan Ave., Highland Park, N. J.
Dale, Jack K. (43)
The Upjohn Co., Kalamazoo, Mich.
Dalier, Joseph (45)
2000 Tulane Ave., New Orleans 19, La.
D'Allegro, Justin (49)
49 Warwick St., Newark, N. J.
Dalman, Lawrence H. (40)
263 Cumberland St., Brooklyn N. Y.
DalNogare, Dorothy L. (47)
396 Watsessing Ave., Bloomfield, N. J.
Dalton, Marucie F. (46)
37 W. Westfield Ave., Roselle Park, N. J.
Dambergis, Constantine A. (46)
39 Eleft Veniseles Ave., Athens, Greece.
Dame, Ray D. (45)
1411 E. 2nd St., Casper, Wyo.
Damiano, Anna (48)
18 Arlington Ave., Clifton, N. J.
Damtoft, Knud J. (17)
338 State St., Bridgeport 3, Conn.
Dana, Walter C. (45)
60 Union St., San Francisco, Calif.
Dandrea, Michael S. (43)
911 Whalley Ave., New Haven, Conn.
Dandreau, John L. (30)
St. John's University, 96 Schermerhorn St., Brooklyn, N. Y.
Danenberg, Jerome (46)
1631 Denniston St., Pittsburgh 17, Pa.
D'Angelo, A. J. (39)
312 Walnut Pl., Chatham Village, Upper Darby, Pa.
D'Angelo, George (47)
305 E. Main St., Bound Brook, N. J.
Danhauer, William E. (14)
404 Frederica St., Owensboro, Ky.
Daniel, Paul (45)
309 Main St., Orange, N. J.
Danielian, Charles G. (48)
545 Weld St., West Roxbury 32, Mass.
Danielian, Leo (49)
Essex Sanatorium, Middleton, Mass.
Daniels, Ludmila (45)
1940 Baker St., San Francisco, Calif.
Daniels, Robert (46)
3881 Sedgwick Ave., New York 63, N. Y.
Daniels, Troy C. (27)
Medical Center, Univ. of Calif., San Francisco, Calif.
Danielson, Ryle W. (44)
142 S. 13th St., Lincoln, Nebr.
Danielsson, Ivar (47)
P. O. Box 475, Reykjavik, Iceland.
Danisewicz, Joseph S. (44)
3852 Trowbridge Ave., Hamtramck 12, Mich.
Dankberg, Isidor B. (46)
1906 Wallace Ave., New York, N. Y.
Dann, Martha T. (49)
1825 S. E. 52nd Ave., Portland 15, Oreg.
Danneker, John M. (22)
1425 Lesseps St., New Orleans, La.

Danziger, Samuel H. (47)
843 Saratoga Ave., Brooklyn 12, N. Y.
Darby, Russell E. (49)
639 Hillcrest Ave., Westfield, N. J.
D'Archangelis, Lawrence C. (47)
122 Avenue S, Brooklyn 23, N. Y.
Dardano, Salvatore Jr. (49)
645 Catherine St., Utica, N. Y.
DARGAVEL, JOHN W. (17)
205 W. Wacker Dr., Rm. 2000, Chicago 6, Ill.
D'Ari, Benjamin (49)
211 Broadway, Monticello, N. Y.
Darling, Andrew J. (46)
Memorial Mission Hospital of Western N. C., Asheville, N. C.
Darling, Harold P. (48)
1615 Broadway, Oakland 12, Calif.
Darlington, Roy C. (41)
Howard Univ., College of Pharmacy, Washington 1, D. C.
Darnall, Leroy W. (49)
4843 S. Kay St., Tacoma, Wash.
DARNELL, HAROLD V. (40)
2231 N. Madison St., Arlington, Va.
Darnell, Robert C. (46)
1821 Tallman, Indianapolis 18, Ind.
Darr, Harry I., Sr. (47)
2801 W. Third St., Chester, Pa.
Dary, Homer, H., Sr. (45)
2010 Michigan Blvd., Racine, Wis.
Dascoll, Jack A. (45)
Dascoll's Pharmacy, Springfield Ave., New Providence, N. J.
Dassori, Edward L. (43)
R. F. D. 4, Station Lane, New Brunswick, N. J.
DATA, JOHN B. (38)
Purdue, Univ., College of Pharmacy, Lafayette, Ind.
Datz, Charles P. (49)
7944 S. Shore Dr., Chicago 17, Ill.
Daughenbaugh, Paul J. (45)
Research & Development, Merck & Co. Inc., Rahway, N. J.
Daugherty, Charles L. (44)
1123 Ohio St., Davenport, Iowa.
D'Aunoy, E. Earl (46)
8445 Panola St., New Orleans 18, La.
D'Aunoy, J. E. (49)
1345 Annunciation St., New Orleans 13, La.
Davalle, John P. (48)
3141 Carlin Ave., Lynwood, Calif.
D'Avanza, Anthony R. (46)
1801 Elysian Fields, New Orleans, La.
Davey, Charles (41)
23140 Edward, Dearborn, Mich.
David, John A. (48)
Eastern Pharmacy, Kirkuk, Iraq.
Davidov, Louis (46)
5115 Roland Ave., Baltimore 10, Md.
Davids, Judson N. (46)
R. D. 6, Carlisle, Pa.
Davidson, Abraham W. (46)
11845 LaSalle Blvd., Detroit 6, Mich.
Davidson, Samuel O. (45)
Box 57, Kansas City, Mo.
Davidson, William (47)
71 E. Milton Ave., Rahway, N. J.
Davidson, Wyly P., Jr. (47)
Camden, Tenn.
Davies, Donald W. (44)
Apt. A, Maple Gardens, Pottstown, Pa.
Davies, Ivor C. (45)
318 E. 2nd St., The Dalles, Oreg.
Davies, William W. (28)
22 Thayer St., Boston, Mass.
Davila, Betty (46)
32 N. Linda, Tucson, Ariz.
Davis, Arthur J. (47)
39 Green St., Ft. Thomas, Ky.
Davis, B. C. (49)
6582 N. E. Sandy Blvd., Portland 13, Oreg.
Davis, Cash (49)
135 W. Main, Medford, Oreg.
DAVIS, CHARLES L. (97)
56 Pleasant St., Newburyport, Mass.
Davis, Clyde (48)
2518 Parkes Ave., Oakland, Calif.
Davis, Dan H. (49)
235 S. E. First Ave., Fort Lauderdale, Fla.
Davis, Edward (46)
Davis Drug Co., Ragland, Ala.
Davis, Edward (47)
c/o Davis Ethical Pharmacy, 76-A-N. Park Ave., Rockville Centre, New York.
Davis Elbert G. (46)
1320 Austin Ave., Waco, Tex.
Davis, Elliot V. (40)
Box 454, Allentown, Pa.
Davis, Eugene H. (46)
130 Maple Ave., Charleroi, Pa.
Davis, George A. (49)
2001 Collingwood Ave., Toledo 2, Ohio.
Davis, George W. (49)
1027 You St., N. W., Washington 1, D. C.
Davis, Gilbert I. (40)
3313 N. Uber St., Philadelphia 40, Pa.
Davis, Helen M. (46)
R. D. 1, Box 582, Akron 12, Ohio.
Davis, Henry J. (48)
4149 Arlington Ave., Los Angeles 43, Calif.
Davis, Herbert J. (47)
1149 Edgmont Ave., Chester, Pa.
Davis, Isaiah E. (44)
144 Dartmouth St., Portland, Me.
Davis, Jack (41)
115 S. W. Third Ave., Portland 4, Oreg.
Davis, Jack (49)
501 Washington Ave., Miami Beach 39, Fla.
Davis, James E. (45)
808 S. Wood St., Chicago 12, Ill.
Davis, James E. (49)
2728 Watson Blvd., Endicott, N. Y.
Davis, James M., Jr. (47)
1605 Joplin St., Joplin, Mo.
Davis, Janice O. (45)
1916 Kirk Ct., N. W., Canton 9, Ohio.
Davis, Julius M. (46)
3 Bayard St., Providence 6, R. I.
Davis, Kenneth B (45)
V A Hospital, White River Junction Vt.
Davis, Lawrence J. (42)
13194 Santa Rosa Dr., Detroit 4, Mich.
Davis, Marvin (48)
406 Badger Ave., Newark, N. J.
Davis, Robert V. (47)
1402 Washburn St., Scranton 4, Pa.
Davis, Ruth B. (47)
560 De Courcelles St., Montreal, P. Q., Canada.
Davis, Thomas A. (45)
McKesson & Robbins, Inc., Macon, Ga.
Davis, William E. (49)
209 E. Lee St., Greensboro, N. C.
Davis, Wilson E. (49)
121 S. Tracy, Wichita, Kans.
Davy, Edward D. (17)
19 Darrock Rd., Delmar, N. Y.
Davy, George H. (46)
261 S. Main St., Butler, Pa.
Dawson, Beatrice (49)
216 Smyth Rd., Manchester, N. H.
Dawson, Beverly A. (47)
Winter St., Midway, Ky.
Dawson, Lisle L. (46)
Wilton Junction, Iowa.
Dawson, Milton (44)
R. F. D. 1, Box 14A, Valley Center, Kans.
Day, H. Winston (46)
1760 N. Howard St., Philadelphia 22, Pa.
Day, Joseph D. (48)
199 N. Main St., Washington, Pa.
Day, Robert H. (46)
913 S. 83rd St., Birmingham, Ala.
Dayton, Frank H. (47)
782 14th St., Oakland 12, Calif.
Daywalt, John W. (43)
292 Elm St., Wabash, Ind.
Dean, Stephen J., Jr. (28)
Coll. of Pharmacy, Univ. of Calif., San Francisco 22, Calif.
Deane, Charles J. (46)
Fordham Coll. of Pharmacy, Fordham 58, N. Y.
de Angelo, A. Jerry (49)
1930 N. Argyle Ave., Los Angeles 28 Calif.
Dearborn, Frederick M. (46)
207 Stadium Park, Iowa City, Iowa.
Deardorff, Dwight L. (47)
Univ. of Illinois, Coll. of Pharmacy, 808 S. Wood St., Chicago, Ill.
Deary, Peggy (45)
401 Broadway, Tacoma, Wash.
DeBenedictis, Joseph M. (49)
44 Watson Ave., West Orange, N. J.
De Bone, E. C. (30)
153 State St., Clairton, Pa.
Debus, John J. (39)
28 W. State St., Trenton 8, N. J.
De Candido, Titian V. (46)
567 Second Ave., New York 16, N. Y.
DeCanniere, Harold E. (47)
Bucklin, Mo.
De Castro, Richard (47)
5623 Avenue M, Brooklyn 3, N. Y.
DeChristopher, Edward P. (46)
745 South St., Peekskill, N. Y.
Decker, Herbert W. (46)
290 E. 232 St., Euclid, Ohio.
Decker, William E., Jr. (48)
223 W. Cook Ave., Libertyville, Ill.
DeCosta, Leo J. (47)
c/o Carter Products, Inc., New Brunswick, N. J.
DeCrescenzo, Armando (46)
365 Gorge Rd., Cliffside Park, N. J.
DeDominicis, Amelia C. (36)
2621 E. Madison St., Baltimore, Md.
Deeb, Alexander E. (48)
149—83rd St., Brooklyn 9, N. Y.
Deeb, Edward N. (48)
Veterans Hospital, Rutland Heights, Mass.
Deemer, Robert G. (48)
1605 Freeport Rd., Tarentum, Pa.
Deen, Charles S. (48)
801 Church St., Vidalia, Ga.
Deen, Tom S. (43)
Peterson Ave., Douglas, Ga.
Deering, Charles B., Jr. (47)
6228 Oakland, St. Louis 10, Mo.
Defenbaugh, Anna R. (45)
151 E. Main St., Circleville, Ohio.
Deffen, O. C. (48)
239 E. Mill St., Akron 9, Ohio.
Deffenbaugh, Elmer R. (46)
2205 W. Main St., Richmond 20, Va.
DeFoe, Ona K. (45)
4588 Parkview Pl., St. Louis 10, Mo.
De Foggi, Dorothy V. (46)
121 S. Cliff St., Butler, Pa.
DeGiovanni, George H. (47)
119 Wilson Ave., Newark 5, N. J.
DeGoler, Harvey (46)
552 Minn. Ave., Kansas City 12, Kans.
De Gomar, Emanuel E., Jr. (46)
5353—4th Ave., S. St. Petersburg 7, Fla.
De Grazio, Rocco (49)
901 N. Trumbull, Chicago, Ill.
De Gruy, Gilbert V. (46)
Elm Pharmacy, 939 Hillary, New Orleans 14, La.
de Haen, Paul (41)
Ames Company, Inc., 51 Pine St., New York 5, N. Y.
DeHaney, W. B. (49)
1110—4th Ct. W., Birmingham 4, Ala.
DeHart, J. Andrew R. (46)
13 E. Cuyahoga Falls Ave., Akron 10, Ohio.
DeHaven, Henry V. (33)
106 W. Gay St., West Chester, Pa.
Dehning, Robert E. (46)
611 S. Liberty, Independence, Mo.
De Horatius, Pasquale (49)
2147 S. 15th St., Philadelphia 45, Pa.
Deininger, Warren L. (46)
1201 J. St., Lincoln, Nebr.
de Jimenez, Margarita R. (48)
5522 Dublin, New Orleans, La.
DEKAY, H. GEORGE (29)
School of Pharmacy, Purdue Univ., LaFayette, Ind.
Delahanty, James E. (48)
721 Greenwood Ave., Trenton 9, N. J.
De Lalla, Vincent (39)
704 Bleecker St., Utica, N. Y.
Delaney, Chris J. (49)
424 E. Roosevelt Blvd., Philadelphia 20, Pa.
De Lano, John J. (47)
7312 N. Hamilton, Chicago 45, Ill.
Delery, Carroll J., Jr. (47)
1530 N. Broad, New Orleans 19, La.
Delgado, Frank A. (31)
%Philippine-American Drug Co., 95 Escolta, Botica Boie, Manila, P. I.

Delger, Arnold D. (49)
2380 Carter Ave., St. Paul 8, Minn.
Del Giacco, Claudia S. (48)
323 State St., Albany, N. Y.
DeLisle, Robert G., Jr. (48)
Box 815, Santa Rosa, Calif.
Delius, Theodore F. (46)
9 Morris Plains Ave., Morris Plains, N. J.
Dellande, Armand J. (46)
City Infirmary Hospital, 5600 Arsenal St., St. Louis 9, Mo.
Dellinger, Clarence M. (45)
35 Glenwood Ave., Dayton, Ohio.
Delmar, Geza S. (45)
4599 Coolbrook, Montreal 28, Que., Canada.
Deloff, James L. (48)
3622 Plainfield Ave., N. E., Grand Rapids 5, Mich.
DE LORENZI, ALBERT (90)
3009 Live Oak St., Dallas, Tex.
De Lorme, Alfred C. Jr. (48)
3563 Oak St., Jacksonville, Fla.
DeLouise, Alfred (49)
122 Davenport Ave., New Haven 11, Conn.
Del Plato, Vincent (48)
99 New St., Newark 2, N. J.
Del Pozzo, Joseph (41)
221 Linden St., Brooklyn, N. Y.
Del Russi, Gerard L. (47)
112 Melrose Ave., Irvington, N. J.
De Luca, Frank (47)
673 E. 230 St., Bronx 66, N. Y.
De Lucco, Frank R. (44)
7237 Pine St., Upper Darby, Pa.
Del Vecchio, Henry W. (39)
52 Bayberry Rd., Franklin Square, L. I., N. Y.
Del Vecchio, Joseph J. (46)
20-38—23rd St., Astoria, L. I., N. Y.
Del Vecchio, Mary V. (45)
20-38—23rd St., Astoria, L. I., N. Y.
Del Vesco, Julian M. (48)
1409 N. 15th Ave., Melrose Park, Ill.
Demarest, H. Westfield (40)
Box 401, Elkins, W. Va.
De Maria, Felice Jos. (38)
1732 S. Mole St., Philadelphia, Pa.
DeMars, Gustave, J. (47)
302 W. Main St., Ada, Minn.
De Martini, Vincent (47)
63 Ridgefield Ave., Ridgefield Park, N. J.
DeMasi, Alice J. (45)
1840 S. 10th St., Philadelphia 48, Pa.
Dement, Margaret (46)
1124 W. 29th St., Los Angeles 7, Calif.
Demers, Francois X., Jr. (47)
20161 Votrebeck Ct., Detroit 19, Mich.
Demers, J. Ulysse (40)
414, rue St-Jean, Quebec, Canada.
Demers, P. S. (44)
75 Main St., Springvale, Me.
DeMong, Laverne E. (47)
1010 S. Oak, Freeport, Ill.
de Montluzin, Rene, Jr. (46)
208 N. Beach Blvd., Bay Saint Louis, Miss.
DeMott, Eldridge E. (47)
13501 Puritan, Detroit 27, Mich.
DeMotte, Walter A. (48)
5732 S. 29th Ave., Omaha, Nebr.
Dempster, Wallace G. (47)
Langdon, N. Dak.
DE NAVARRE, MAISON G. (34)
404 Lothrop Road, Grosse Pointe Farms 30, Mich.
DeNeal, George A. (48)
4500 Virginia Ave., St. Louis 11, Mo.
DeNeal, Kenneth G. (47)
4500 St. Louis St., St. Louis 11, Mo.
de Neergaard, William (37)
454 Fifth Ave., Brooklyn, N. Y.
Denegar, Harold R. (47)
Germantown, N. Y.
Denenberg, Harry (47)
1052 Brunswick Ave., Trenton 8, N. J.
Dengler, George W. (49)
11 Cherry St., Cranford, N. J.
Dengler, William E. (41)
1900 Gratiot Ave., Saginaw, Mich.
De Nicola, John (47)
1440 Dixwell Ave., Hamden 14, Conn.

Dennis, John F. (49)
4119 Westway, Toledo 12, Ohio.
Dennis, William (43)
1820 N. Natrona St., Philadelphia 21, Pa.
Deno, Richard A. (37)
1 Lincoln Ave., Newark 4, N. J.
Densow, Bert B. (48)
527 W. Riverside, Spokane, Wash.
Dent, Gay H. (36)
130 Fayett St., Morgantown, W. Va.
de Oliveira, Orlando (48)
Soc. Nostrum Lda., Aveiro, Portugal.
DePalma, C. W. (44)
238 Bishop St., Waterbury 70, Conn.
De Palma, Vincent (47)
73 Warwick Ave., Rochester 11, N. Y.
De Philip, Joseph R. (45)
3500 Fifth Ave., Pittsburgh 13, Pa.
de Ponce, A. Mesa (40)
Calle Juan Delegado 455, Vibora, Habana, Cuba.
Derbabian, Ohannas J. (49)
7329 Whittaker, Detroit 9, Mich.
Deremiah, Joseph W. (45)
6214 Fulton St., San Francisco, Calif.
Derge, Melvin (46)
522—56th St., Kenosha, Wis.
DeRosa, Anthony J. (44)
146 Summit Ave., Jersey City 4, N. J.
DeRosa, Joseph A. (44)
146 Summit Ave., Jersey City 4, N. J.
DeRouen, Dorothy (46)
2051 Magazine St., New Orleans 15, La.
De Rouen, Irene M. (49)
2051 Magazine, New Orleans 13, La.
DeSandis, Carmel F. (45)
319 N. Abington Rd., Clarks Green, Pa.
DeSantis, Frank (47)
341 Chelsea Ave., Long Branch, N. J.
De Sesso, George A. (48)
Main St., Peapack, N. J.
Deslauriers, Gerard D. (47)
458 Gratton St., Chicopee Falls, Mass.
DeSpirit, Don (45)
3835 Pennsylvania, Detroit 14, Mich.
Des Rochers, Anita (40)
535 Main St., Manchester, N. H.
Deterling, B. A. (49)
Granite Falls, Minn.
Detry, Gordon J. (48)
1604 Washington St., Manitowoc, Wis.
Dettloff, Clarence A. (48)
815—6th St., Coronado, Calif.
Dettmer, Jean E. (45)
505 Barron Ave., Woodbridge, N. J.
Deuchler, Joseph H. (47)
38 Main St., Sussex, N. J.
Deuel, Milo W. (46)
2847—7th Ave., Rock Island, Ill.
Deutch, Samuel (45)
65 Nagle Ave., New York 34, N. Y.
Deutsch, M. J. (47)
1859 Palmer Ave., Larchmont, N. Y.
Deutzer, Harry J. (46)
1719 Concordia St., Pittsburgh 10, Pa.
Devine, E. Elizabeth (47)
120 Dolhonde St., Box 187, Gretna, La.
Devine, Thomas J. (48)
412 First St., Dunellen, N. J.
DeVries, Cara L. (45)
401 S. Defiance St., Archbold, Ohio.
DeVries, Hiram J. (46)
224 S. Holmes St., Lansing 12, Mich.
De Vries, J. Bernard (44)
839 W. End Ave., New York 25, N. Y.
DeWees, Robert J. (46)
340 Brighton Blvd., Zanesville, Ohio.
DeWeese, Helen K. (46)
840 Avenue C, Westwego, La.
Dewell, Burdette G. (48)
8 Capital, Delmar, N. Y.
Dewey, Bartlett T. (42)
Eastern New Mexico College, Portales, N. Mex.

De Young, Tharon M. (47)
610 Barnard St., Lansing, Mich.
Diamantis, Wm. (44)
101 Post Ave., New York 34, N. Y.
Diamond, Joseph M. (45)
343 Avon Ave., Newark 8, N. J.
Diamond, Melvin (48)
113 Wellington Hill St., Mattapan 26, Mass.
Diamond, Ralph (48)
215 McClellan St., New York 56, N. Y.
Diaz, Anal. (46)
Jose Gautier Benitez #39, Caguas, Puerto Rico.
Diaz-Rosado, Filiberto (49)
803 Mariana Bracetti St., Stop 38½, Rio Piedras, Puerto Rico.
Dice, Guy K., Jr. (43)
816 S. Ashland Blvd., Chicago 7, Ill.
DiCicco, Elinor (44)
110 E. Main St., Stoughton, Wis.
Dickerson, Byrne (48)
2010 Vassar Ave., Fresno 4, Calif.
Dickey, Alva (43)
814 Broadway, Wellsville, Ohio.
Dickey, Laurence W. (37)
Standard Oil Co. of Calif., Richmond, Calif.
Dickinson, Dorothy (43)
Patten Drug Store, Patten, Me.
Dickinson, Henry M. N. (47)
2903 Chamberlayne Ave., Richmond 22, Va.
Dickison, Walter L. (49)
619 Pleasant St., Boulder, Colo.
Dicknite, Dale J. (46)
105 E. Cedar, West Point, Nebr.
Dickson, Dorothy D. (47)
248 S. E. 83rd Ave., Portland 16, Oreg.
DICKSON, FREDERICK W. (06)
Homewood Apts., Charles & 31st Sts., Baltimore, Md.
Dickson, L. V. (41)
7937 S. E. Stark St., Portland 16, Oreg.
Dickson, William Z. (49)
1201 S. E. 71st Ave., Portland 16, Oreg.
DiDomenico, Peter J. (48)
Old Tappan Rd., Tappan, N. Y.
Didra, Orlando (49)
716—2nd Ave., N. E., Waseca, Minn.
Diedrich, Raymond A. (47)
966 N. 27, Milwaukee 8, Wis.
Dieffenbacher, Clyde (49)
324 S. Osage Ave., Wichita 12, Kans.
Diegelmann, Leo F. (43)
3745 Cumberland St., N. W., Washington, D. C.
Dieguez S., Rogelio (49)
Central Cacocum, Palomo, Orte, Cuba.
Dierdorf, Charles (47)
12 S. 8th St., West Terre Haute, Ind.
Dietel, Herman J. (20)
c/o Merck & Co., Inc., 1855 Industrial St., Los Angeles 21, Calif.
Dietrich, Clarence (49)
852 Hoffman St., Hammond, Ind.
DiGangi, Frank E. (41)
College of Pharmacy, Univ. of Minnesota, Minneapolis, Minn.
Digby, Rex E. (49)
2417 Mortenson, Berkley, Mich.
Diggs, Edward W. (43)
2701 S. Hanna, Fort Wayne 4, Ind.
DiGiorgio, Oronzio A. (47)
3110 E. Tremont Ave., Bronx 61, N. Y.
DiGiovanni, George (46)
33 S. W. 52nd Ct., Miami, Fla.
Di Lascio, Edith M. (49)
1207 Windrim Ave., Philadelphia 41, Pa.
Dillard, Cecil (47)
412 S. 12th Ave., Maywood, Ill.
Dillard, Robert G. (45)
503 Littlefield Bldg., Austin 15, Tex.
Dille, James M. (40)
School of Medicine, Univ. of Washington, Seattle 5, Wash.
Dillon, J. T. (36)
St. Andres Hotel, Portland 7, Oreg.
Dillon, Raymond I. (45)
644 Main St., New Rochelle, N. Y.
Dillon, Richard J. (44)
Paw Paw, Mich.

Dillon, William M. (46)
108 N. Union, Independence, Mo.
Di Lorenzo, Pasquale (49)
Wood & Washington Sts., Bristol, Pa.
DiMaria, Salvatore (47)
215 Boulevard, Hasbrouck Heights, N. J.
Dimmitt, Addison, Jr. (42)
Newman Pharmacal Co., 318 W. Main St., Louisville 2, Ky.
DIMOND, HARRY J. (04)
330 Connecticut St., Buffalo, N. Y.
Diner, Ervin (49)
2451 S. 20th, Philadelphia 45, Pa.
Dines, Jacob A. (47)
5526 Black St., Pittsburgh 6, Pa.
Dinger, Allen L. (49)
7200 Ridge Blvd., Brooklyn 9, N. Y.
Dinwiddie, Walter C. (48)
6006 Floyd St., Houston, Texas.
Dion, Kenneth M. (47)
661 E. 22nd St., Paterson 4, N. J.
Dion, Sylvio D. (49)
175 Main St., Nashua, N. H.
Di Paola, E. Donato (47)
298 Newark Ave., Jersey City 2, N. J.
Di Pasquale, Italo (46)
105 Lincoln Rd., Brooklyn 26, N. Y.
DiPasquale, Patsy M. (48)
36 W. Philadelphia Ave., Youngstown, Ohio.
Dippold, Robert A. (41)
401 W. Chestnut St., Gillespie, Ill.
Dirstine, P. H. (22)
501 High St., Pullman, Wash.
Ditchek, David N. (44)
70 Tompkins Ave., Brooklyn 6, N. Y.
Dite, Edward F. (46)
402 Chicago Ave., Hot Springs, S. Dak.
Ditmars, Voorheis M. (47)
17 Elliott Row, Saint John, N. B., Canada.
Dittmar, Moritz A. (23)
165 Franklin St., Bloomfield, N. J.
Dittmar, Nelson W. (46)
924 Broadway, Bayonne, N. J.
Dittmar, Richard O. (47)
6514 Bergenline Ave., West New York, N. J.
Dittrich, Theodore, T. (43)
Univ. of Kansas City, Kansas City 4, Mo.
Divine, Edward H. (46)
Suite 208, Carlson Bldg., 636 Church St., Evanston, Ill.
Divine, P. G. (47)
1117 Sussex Ave., Fresno, Calif.
Dixon, A. M. (46)
181 Newark-Pompton Pike, Mountain View, N. J.
Dixon, Jos. M. (46)
203 Vernon St., Roseville, Calif.
Dixon, L. J. (47)
43 Sunset Rd., Hampton, Va.
Dixon, Mona L. (49)
2503 Charlestown, Toledo 12, Ohio.
Dixon, William J. (47)
Oak Hill, W. Va.
Dmytriw, Nicholas (47)
1010 Rahway Ave., Avenel, N. J.
Doane, Wayne E. (47)
306 Spokane St., Wenatchee, Wash.
Dobbins, Charles A. (47)
Pleasanton Pharmacy, Pleasanton, Tex.
Dobbs, Bert R. (46)
3809½ S. Birdloug, Los Angeles 37, Calif.
Dobosh, Stephen E. (31)
7011 Otis Ave., Apt. G., Bell, Calif.
Dobson, Clair V. (43)
100 E. Midlothian Blvd., Youngstown 5, Ohio.
Dobson, Dudley C. (47)
Legion Ct., Lafayette 1, Calif.
Dobson, Harold G. (46)
58 Main St., Brockport, N. Y.
Dock, Ben (43)
5176 Guilford Ave., Indianapolis, Ind.
Doctofsky, Maxim (46)
95 Main St., Woodbridge, N. J.
Dodd, James P. (48)
1531 Manor Dr., San Pablo, Calif.
Dodds, A. F. (46)
School of Pharmacy, Medical College of S. Carolina, Charleston, S. C.
Dodds, Arthur W. (44)
147 Fay's Ave., Lynn, Mass.
Dodds, Roberta E. (49)
6204—12th Ave., N. E., Seattle 5, Wash.
Doden, Herbert F. (46)
817—24th Ave., Rock Island, Ill.
Dodge, Arnold H. (48)
Division of Commissioned Officers, U. S. Public Health Service, Washington 25, D. C.
DODGE, AUSTIN A. (31)
School of Pharmacy, Univ. of Mississippi, University, Miss.
Dodson, Norris A. (41)
2253 8th St., N. W., Washington, D. C.
Doeltz, Karl F. (44)
Sleepy Eye, Minn.
Doerge, Robert F. (45)
Coll. of Pharmacy, Univ. of Texas, Austin, Tex.
Doerhoefer, Rudolph W., Jr. (49)
314 S. 34th, Louisville 12, Ky.
Doerr, Albert (46)
Napoleon, N. Dak.
Doerr, George V. (45)
Box 69, Minneapolis 1, Minn.
Doerr, H. C. (45)
Box 1077, Sioux City 6, Iowa.
Doerschuk, Albert P. (44)
Department of Chemistry, Columbia University, New York 27, N. Y.
Doherty, Marguerite R. (47)
1124 Grant Ave., Bronx 56, N. Y.
DOHME, ALFRED R. L. (91)
415 Baltimore Life Bldg., Charles & Saratoga Sts., Baltimore, Md.
Doiwa, Paul (26)
1305 N. Charles St., Baltimore 1, Md.
Dolcini, Mabel B. (45)
St. Lukes Hospital, San Francisco 10, Calif.
Dolese, J. W., Jr. (47)
1513 Juanita Way, Berkeley, Calif.
Dolezal, Stanley, M. (46)
1401 S. Hope St., Rm. 326, Los Angeles 15, Calif.
Domesick, Harry N. (45)
131 Chemlsford St., Lowell, Mass.
Dominguez, Marie C. (44)
124 Glenwood Dr., Metaire #20, New Orleans, La.
Donaldson, John E. (46)
77 P St., N. E., Washington 2, D. C.
Donaldson, Thos. (31)
Market & 2nd St., Wilmington, Del.
Donatelli, John (46)
752 Merchant St., Ambridge, Pa.
Donathan, Carl H. (47)
1244 W. Shaw St., Ft. Worth, Tex.
Dondero, Frank E. (45)
6 Regent Rd., Belmont 79, Mass.
Donelan, Richard D. (48)
427 Foote Ave., Bellevue, Ky.
Doniger, Alfred S. (47)
266 Monroe St., Rahway, N. J.
Donnell, M. M. (45)
Cor. Second & Washington Sts., The Dalles, Oreg.
Donnell, William G. (49)
151 Broadway, Fort Edward, N. Y.
Donofrio, Fred J. (47)
77 Lincoln Park, Newark 2, N. J.
Doodlesack, Louis (49)
34 Ashland St., Medford 55, Mass.
Doring, Lorenz F. (46)
613 Ocean Ave., Jersey City 5, N. J.
Dorn, Henry H. (49)
Gervais Street Pharmacy, Columbia S. C.
Dorrance, Ralph G. (46)
Gen. Del., Denver, Colo.
Dorris, Lester E. (45)
408 Polk St., Charleston, Ill.
Dorscht, Elia G. (48)
590 Ft. Washington Ave., New York 33, N. Y.
DORSEY, JACK W. (36)
42 E. McClain Ave., Scottsburg, Ind.
Dotterweich, Joseph H. (45)
c/o Buffalo Pharmacal Co., Inc., 206 Oak St., Buffalo 3, N. Y.
Doty, George L. (47)
1545 E. Walnut, Decatur 40, Ill.
Doty, J. Roy (49)
222 E. Superior, Chicago 11, Ill.
Doty, Nancel V. (46)
802 W. Capitol St., Jackson, Miss.
Doubek, Rudolph J. (46)
5101 S. Hermitage Ave., Chicago 9, Ill.
Doudna, Donald M. (46)
Spiret Lake, Iowa.
Dougherty, A. J. (45)
804 W. Indiana Ave., South Bend 14, Ind.
Douglas, Albert R. (49)
901 College, Bowling Green, Ky.
Douglas, H. B. (46)
Bonifay, Fla.
Douglas, René H. (40)
741 Sheridan Rd., Evanston, Ill.
Douglas, Sam P. (46)
116 N. W. Colorado, Portales, N. Mex.
Dove, Glen R. (47)
3318 Roger Pl., St. Louis 16, Mo.
Dove, William E. (45)
190 N. Livingston Ave., Livingston, N. J.
Dow, James L. (24)
181 Main St., Lancaster, N. H.
Dowdy, Elsie (45)
127 Sherwood Ave., Raleigh Ct., Roanoke, Va.
Dowell, Leonard B. (48)
c/o Schering Corp., 2 Broad St., Bloomfield, N. J.
Dowling, Clement J. (46)
5001 S. Grand Blvd., St. Louis 11, Mo.
Downar, William J. (45)
415 Warburton Ave., Hastings-on-Hudson, N. Y.
Downer, William J. (46)
109 Old Oak Lane, Island Trees, L. I. N. Y.
Downing, E. Lester (49)
235 W. Third, Prineville, Oreg.
Downs, Donna J. (48)
415 Palouse St., Wenatchee, Wash.
Doyle, Burton V. (46)
2031 Grove St., Apt. 6, Berkeley, Calif.
Dozoretz, Victor X. (45)
1384 Main St., Buffalo 9, N. Y.
Drabkowski, William B. (49)
7292 Wykes, Detroit 10, Mich.
Dragon, Michael A. (49)
59 Morgantown St., Fairchance, Pa.
Draim, Maurice A. (29)
2115 N. Second St., Vincennes, Ind.
Drain, George W. (37)
1649 N. Broad St., Hardt Bldg., Rm. 503, Philadelphia, Pa.
Drescher, Frank J. (43)
Route 13, Box 537, Akron 1, Ohio.
Dressler, Elvera H. (41)
1026 Brummel St., Evanston, Ill.
Dretzka, Sylvester H. (34)
161 W. Wisconsin Ave., Milwaukee 3, Wis.
Drews, Elmer G. (48)
1854 Alsace Ave., Los Angeles 35, Calif.
Drexler, Jack (48)
3423 Fulton St., Brooklyn 8, N. Y.
Dreyer, Samuel A. (39)
87 Wolfs Lane, Pelham, N. Y.
Dreyfus, H. Watson (37)
County Hospital, San Bernardino, Calif.
Dreyfus, Richard (49)
270 First Ave., New York 9, N. Y.
Driscoll, Gladys T. (46)
52 Nichols St., Everett 49, Mass.
Driscoll, Walter E., Jr. (48)
800 Louisa St., New Orleans 17, La.
Driskell, James V. (47)
416 Main St., Carrollton, Ky.
Drolet, Louis P. (49)
8218 Poe St., Apt. 11, Detroit 6, Mich.
Drommond, Fred G. (47)
College of Pharmacy, Univ. of Colorado, Boulder, Colo.
Drouillard, Jeanette M. (49)
25565 Gibralter, Flat Rock, Mich.
Drouillard, Joseph R. (49)
28674 Detroit, Flat Rock, Mich.
Drown, M. D. (45)
711 E. Bixby Rd., Long Beach 7, Calif.
Drucker, Edwin (44)
11205 Calvert St., North Hollywood, Calif.
Drucker, Harold H. (47)
Kingstree, S. C.
Druehl, Amanda S. (45)
2652 N. Halstad St., Chicago, Ill.
Drukatz, Jack M. (47)
2939 Boradway, New York 25, N. Y.
Drumm, Frederick F. (46)
c/o Hill's Pharmacy, Ottumwa, Iowa.

Drummond, Robert C. (46)
185 Edgar St., Woodbridge, N. J.
Drury, Elnorah (47)
1407a Rodgers, Alton, Ill.
Druss, L. A. (44)
2 W. Post Rd., White Plains, N. Y.
Drygas, T. J. (44)
4021 Dexter St., Roxborough, Philadelphia 28, Pa.
Dube, Clarence O. (47)
1211 Wrightwood Ave., Houston, Tex.
Dublin, Charles B. (49)
220 E. Hazeltine Ave., Kenmore 17, N. Y.
Dublon, Emilie (42)
200 W. Houston St., New York 14, N. Y.
Duboff, Benjamin (49)
1977 Bergen St., New York 33, N. Y.
Dubrow, Leo (46)
219 Holland Rd., South Orange, N. J.
Duckek, Lillian G. (47)
3210 E. Huron River Dr., Ann Arbor, Mich.
Ducker, Emil (43)
100 Van Cortland Park, S., Bronx 63, N. Y.
Duckworth, David J. (49)
101 W. Main, Mesa, Ariz.
Duckworth, James W. (46)
249 Shields Rd., Youngstown 7, Ohio.
Duckworth, Joseph W. (43)
107 Main St., Booneville, Miss.
Duda, George T. (49)
707 Carothers Ave., Carnegie, Pa.
Dudding, Charles W. (46)
Box 187, Holbrook, Ariz.
Duderstadt, Peery (36)
703 E. Euclid St., Arlington Heights, Ill.
Dudley, B. F. (44)
46 Pine St., Portland, Me.
Dudley, R. S. (31)
1741 W. Howard St., Chicago 26, Ill.
Dudley, William E. (48)
77 Warren St., Brighton 35, Mass.
Dudley, William G., Jr. (47)
Box 1355, Reidsville, N. C.
Dudrow, Ralph C. (34)
4208 Farragut St., Hyattsville, Md
Dueker, Leonard J. (42).
6540 Hancock Ave., St. Louis 9, Mo.
Duellman, Myles Ed. (31)
P. O. Box 75, Bristol, Tenn.
Duemmling, Francis (25)
49 St. John St., Jamaica Plain, Mass.
Duescher, Herbert O. (46)
1515 Western Ave., Waukegan, Ill.
Duff, Charles J. (49)
5807 Walnut, Pittsburgh 7, Pa.
Duffner, Richard J. (46)
616 Second Ave., S. E., Watertown, S. Dak.
Duffy, Henry J. (45)
1924 Pleasant St., Fall River, Mass.
Dufrenoy, Jean (46)
Univ. of Calif. Medical Center, College of Pharmacy, San Francisco 22, Calif.
Dugan, John J. (44)
Taft Pharmacy, 75 College St., New Haven, Conn.
Dugas, August C. (44)
3017 Chestnut, Long Beach, Calif.
Dugas, Lee J. (46)
63 Hickory St., Harahan, La.
Duggan, Margaret (47)
1537 W. 58th St., Los Angeles 36, Calif.
Duhon, Mitchell G. (47)
Route 2, Box 241, Lake Charles, La.
Duke, Charles C. (46)
P. O. Box 706, San Benito, Tex.
DULANEY, JOSEPH F. (02)
Box 60, McKinney, Tex.
Dumont, Alfred A. (44)
278 Main St., Hyannis, Mass.
Dunaway, Elvin E., Jr. (49)
108 S. Adams, Henderson, Ky.
Dunaway, W. H. (47)
209 Seminole Dr., Marietta, Ga.
Dunay, John G. (47)
314 Hawkins Ave., Rankin, Pa.
Dunbar, G. S. (38)
250 Bronxville Rd., Bronxville, N. Y.
Duncan, Alfred J. (46)
c/o Glendale Pharmacy, Glendale, Ariz.
Duncan, Cyril D. (47)
Franklin, Ky.
Duncan, David G. (48)
4289 Piedmont Ave., Oakland 11, Calif.
Duncan, Jeanne (43)
914 Vine St., New Castle, Ind.
Duncan, Joseph J. (46)
1531 N. Pierce St., Apt. 203, Arlington, Va.
Duncan, Patricia (44)
1021 W. 4th, Spokane 9, Wash.
Duncan, Robert W. (45)
138 S. Lake St., Los Angeles 4, Calif.
Duncan, Stanley (47)
4302 Decoursey Ave., Covington, Ky.
Dunefsky, Philip (47)
1775—46th St., Brooklyn 4, N. Y.
Dungan, Charles (45)
Memorial Hospital, Springfield, Ill.
Dungey, Theadore E. (45)
26 Columbia Dr., Williamsville 21, N. Y.
Dunham, Ira W. (46)
101 S. Main St., Nappanee, Ind.
Dunham, Norris (49)
108 Waldron, West Lafayette, Ind.
Dunkel, James H. (49)
670 Estelle Ave., Glendale 2, Calif.
Dunker, Melvin F. W. (32)
College of Pharmacy, Wayne Univ., 625 Mullett St., Detroit 26, Mich.
Dunley, Alice M. (46)
1103 S. 11th St., Centerville, Iowa.
Dunn, Charles G. (48)
4618 Frankford Ave., Baltimore 6, Md.
Dunn, Charles W. (29)
608 Fifth Ave., Rm. 1009, New York, N. Y.
Dunn, J. S. (45)
Conecuh Drug Co., Evergreen, Ala.
Dunn, L. P. (49)
2105 S. E. 31st Ave., Portland 15, Oreg.
Dunn, Lowell P. (45)
808 E. Main St., Klamath Falls, Oreg.
Dunn, Marin S. (24)
Phila. College of Pharmacy & Science, Philadelphia, Pa.
Dunn, Milton (43)
10 Center St., Sheffield, Pa.
Dunn, Patricia (46)
921—19th St., N. W., Washington, D. C.
Dunn, Rose M. (46)
122 S. Second St., Cannelton, Ind.
Dunnavan, Junius C. (49)
137 E. Wampum, Louisville 9, Ky.
Dunning, Charles A. (48)
312 Northfield Pl., Baltimore 10, Md.
Dunning, Fitzgerald (27)
Charles & Chase Sts., Baltimore, Md.
Dunning, Mrs. H. A. B. (27)
4215 Greenway, Baltimore, Md.
Dunning, H. A. Brown, Jr. (48)
1030 N. Charles St., Baltimore 1, Md.
DUNNING, HENRY ARMITT BROWN (02)
c/o Hynson, Wescott & Dunning, Charles & Chase Sts., Baltimore, Md.
Dunnington, Charles B. (45)
168 Main St., Brockton 1, Mass.
Dunnum, DeVerne G. (48)
Page, N. Dak.
Dupree, Rufus L. (47)
208 N. Bryne St., McKinney, Tex.
Duraj, John G. (46)
170 Eckford St., Brooklyn 22, N. Y.
Duran, Pete G. (46)
1929 W. Central Ave., Albuquerque, N. Mex.
Durando, Vera C. (45)
1628 S. 12th St., Philadelphia 48, Pa.
Durham, William H. (47)
Florence Hotel Pharmacy, Missoula, Mont.
Duryee, Merle E. (48)
7131 Eastlawn Dr., Cincinnati 16, Ohio.
Duschock, Stephen M. (46)
54 Main St., South River, N. J.
Dusenberry, James E. (46)
1144 S. 11th, Lincoln 2, Nebr.
Dussault, Albert H. (44)
Cor. Broad & Mill Sts., New Auburn, Me.
Duvall, Josephine M. (46)
719 McKean Ave., Donora, Pa.
Duxbury, Ralph E. (49)
Eleva, Wis.
Dvorak, J. T. (49)
Aberdeen, Idaho.
Dvorak, Mary Agnes (43)
Lakewood Hospital, Lakewood 7, Ohio.
Dworkin, Joseph P. (47)
c/o Bedford Drugs Inc., 631 Broadway, Bedford, Ohio.
Dworkin, William D. (49)
2456—20th St., N. W., Apt. 504, Washington, D. C.
Dwyer, Harold F. (48)
301 W. Washington, Phoenix, Ariz.
Dwyer, John H. (47)
1601 Bellevue Ave., Syracuse 4, N. Y.
Dyckmans, John J. (46)
37 Hillside Ave., Bassett Park, Mine Hill, N. J.
Dyer, Glen E. (48)
2429 Lanterman Ter., Los Angeles 26, Calif.
Dyer, Raymond (46)
Milford, N. H.
Dykema, Jacob C. (49)
112 Fulton St. E., Grand Rapids 2, Mich.
Dymond, Jack R. (46)
21 Wellington St., Brantford, Ont., Canada.
Dymond, Reginald D. (34)
82 Dalhousie St., Box 95, Brantford, Ont., Canada.
Dynowski, Stanley W. (49)
1358 Broadway, Buffalo 12, N. Y.
DYNIEWICZ, JOSEPHINE M. (19)
447 Washington Blvd., Oak Park, Ill.
Dziedzic, Bernard J. (39)
1950 W. Mitchell St., Milwaukee 4, Wis.
Dziennik, Roman J. (45)
2000 W. Forest Home Ave., Milwaukee 7, Wis.

# E

Eadie, Edward B. (48)
Route 8, Box 456-A, Charlotte 6, N. C.
Earl, Noble C. (37)
71 Chestnut St., Camden, Me.
Early, James B. (41)
178 Lenox, Detroit 15, Mich.
Easley, Kenneth J. (49)
428 W. 4th St., Frankfort, Ky.
Easley, Lucy T. (49)
428 W. 4th St., Frankfort, Ky.
East, Frank A. (42)
1858 Centre St., West Roxbury, Mass.
Eastman, Roger F. (46)
Tripp, S. Dak.
Easton, James O., Jr. (49)
558 Glenwood Ave., Johnstown, Pa.
Eaton, Albert (46)
123 W. Main St., Weatherford, Okla.
Eaton, C. Ellsworth (43)
1641 Estes Ave., Chicago 26, Ill.
Eaton, F. Elmer (45)
170 Essex St., Salem, Mass.
Eaton, M. C. (16)
Norwich Pharmacal Co., Norwich, N. Y.
Ebenhack, Clarence A. (46)
1857 Rosemont Rd., East Cleveland 12, Ohio
Eberhard, Hershel (45)
2910 Broadway, Kalamazoo 37, Mich.
EBERHARDT, ERNEST G. (06)
5882 Pleasant Run Blvd., Indianapolis, Ind.
Ebert, Herbert J. (44)
77-22—64th Lane, Glendale, Brooklyn 27, N. Y.
Ebert, Joseph (34)
1619 Chestnut St., Philadelphia 3, Pa.
Ebner, Frank G. (41)
877 Barrington Rd., Grosse Pointe Park, Mich.
Eby, Frank H. (24)
109 Fairview, Springfield, Pa.

Eby, Marguerite T. (45)
714 Columbia Ave., Lancaster, Pa.
Eby, Paul T. (48)
714 Columbia Ave., Lancaster, Pa.
Eck, Earl E. (45)
318 W. Main St., Lewistown, Mont.
Eckels, Leander James (37)
207 N. Front St., Steelton, Pa.
Eckstrom, Calvin W. (46)
5218 N. Paulina St., Chicago 40, Ill.
Eddy, Clyde L. (17)
c/o E. R. Squibb & Sons, 32–14 Northern Blvd., Long Island City, N. Y.
Eddy, John H. (48)
R. F. D. 1, Box 64-E, Ukiah, Calif.
Eddy, Russell J. (49)
116 W. 14th St., New York 11, N. Y.
Edelman, Dr. Leonard E. (49)
608 California Ave., Pittsburgh 2, Pa.
Edelnant, Alex (49)
5301 N. Ashland Ave., Chicago 40, Ill.
EDGAR, SYDNEY (46)
86 Bergen Ave., Apt. C-10, Teaneck, N. J.
Edge, Nicholas J. (37)
5401 Chester Ave., Philadelphia, Pa.
Ediger, Donald D. (46)
1127 W. Broadway, Newton, Kans.
EDISON, MRS. THEODORE M. (36)
Llewellyn Park, West Orange, N. J.
Edlin, Max (47)
321 Elm St., Kearny, N. J.
Edmiston, Bill L. (48)
2503 N. 36th St., Boise, Idaho.
Edmiston, William K. (44)
109 Mamie St., Hattiesburg, Miss.
Edmondson, Jack E. (46)
208 Fillmore St., Dayton 10, Ohio.
Edmunds, W. T. (41)
502 Broad St., Augusta, Ga.
Edsell, Robert M. (47)
1933 California, St. Louis 4, Mo.
Edwards, Earle H. (43)
2970 W. Grand Blvd., Detroit 2, Mich.
Edwards, Floyd W. (47)
1321 N. 5th St., Covington, Ind.
Edwards, Josephine R. (49)
206–23rd St., Apt. 6, Oakland 12, Calif.
Edwards, Leroy D. (27)
School of Pharmacy, Purdue Univ., Lafayette, Ind.
Edwards, Nicholas H. (47)
1061 Kyle St., Memphis, Tenn.
Edwards, Stephen B. (47)
Veterans Hostpial, T. A. Box, Dallas, Tex.
Edwards, Sterling C. (48)
2001 McNary Blvd., Pittsburgh 21, Pa.
Edwards, Webster K. (47)
238 Virginia Ave., Cumberland, Md.
Edwards, Wilbur J. (48)
28 Wymon St., N. E., Atlanta, Ga.
EerNisse, Welles C. (46)
1021 St. Cloud St., Rapid City, S. Dak.
Effros, Alexander (46)
41 Holsmann St., Paterson, N. J.
Egan, W. J. (47)
143 N. Water, Milwaukee 2, Wis.
Egdall, Henry G. (45)
60 Kilsyth Rd., Brookline 46, Mass.
Egebrecht, Russell O. (47)
1327 N. Parkside Ave., Chicago 51, Ill.
Egel, Francis D. (45)
2876 N. 27th St., Milwaukee, Wis.
Egelston, Richard C. (46)
Box 4741, Kansas City, Mo.
Eggeman, Merton J. (49)
Mt. Vernon, Mo.
Eggers, Samuel M. (46)
347 E. Columbia St., Danville, Ind.
Eggett, Earl H. (46)
3700th Stat. Med. Sq., Lackland A. F. Base, San Antonio, Tex.
Ehnis, Waldo H. (44)
1815 Sterling Ave., Lansing, Mich.
Ehrenberg, Siegfried (46)
145 Main St., Ravena, N. Y.
Ehrenstein, Elsa (46)
4840 Pine St., Philadelphia 43, Pa.
Eichberg, Daniel M. (49)
3502 Grantley Rd., Baltimore 15, Md.
EICHOLD, B. H. (05)
165 S. Georgia Ave., Mobile, Ala.
Eidsmoe, Clark T. (31)
College Station, Brookings, S. Dak.
Eidus, Arthur (46)
c/o Appel, 204 Ellery St., Brooklyn, N. Y.
Eilbracht, William C. (43)
301 Park St., Waterloo, Ill.
Eiler, John J. (43)
Univ. of Calif., Medical Center, San Francisco, Calif.
Einbeck, Arthur H. (43)
6024 Bergenline Ave., West New York, N. J.
Einstein, Simeon (46)
446 Delaware Ave., Albany, N. Y.
Eisele, Garnett M. (49)
Arlington Hotel Arcade, Hot Springs, Ark.
Eisen, Henry (46)
4231 Bedford Ave., Brooklyn 29, N. Y.
Eisen, Jacob (46)
31 Shanley Ave., Newark 8, N. J.
Eisen, Leon (45)
Box 591, Main Station, Yonkers 1, N. Y.
Eisen, Seymour H. (47)
5309 W. Quincy Ave., Chicago, Ill.
Eisenacher, William A. (46)
Box 361, Placentia, Calif.
Eisenberg, Harold M. (44)
3607 Pennington Rd., Shaker Heights 20, Ohio.
Eisenhower, James S. D. (48)
2700 Pacific Ave., Wildwood, N. J.
Eisentraut, Llewellyn L. (42)
Harding Rd., Des Moines, Iowa.
Eitner, Albert G. (48)
263 G. St., Salt Lake City 3, Utah.
Eizelman, Seymore A. (47)
2739 Monterey, Detroit 6, Mich.
Elardo, Peter J. (48)
442 Potomac Ave., Buffalo 13, N. Y.
Elder, Paul B. (37)
805 E. Mulberry St., Bryan, Ohio.
Eldon, William S. (49)
17519 Wanda, Detroit 3, Mich.
Eldred, William A. (46)
709 Francis Palms Bldg., Detroit 1, Mich.
Elfman, R. R. (43)
1311¼ N. Hayworth Ave., Hollywood 46, Calif.
Elich, Robert W. (36)
Route 1, Box 269A, Des Plaines, Ill.
Eliot, Eustace (45)
811 E. Mason St., #21, Milwaukee 2, Wis.
Elkes, Betty (47)
162 W. Bigelow St., Newark 8, N. J.
Elkin, Bernard (48)
1244 Greeby St., Philadelphia 11, Pa.
Elkins, Carl H. (47)
105 Broadmoor, Topeka, Kans.
Elkiss, Stanley (47)
17215 Prairie, Detroit 21, Mich.
Ellegast, Joseph J. (47)
870 E. 241 St., Bronx 66, N. Y.
Ellegood, J. A. (46)
213 Parker Ave., Upper Darby, Pa.
Elliot, C. Elizabeth (43)
4567—35th W., Seattle 99, Wash.
Elliot, V. Kiefer (46)
201 N. Main, Sheridan, Ind.
Elliott, Charles R. (46)
Route 17, Box 217, Indianapolis 44, Ind.
Elliott, Edward C. (46)
1703 K St., N. W., Washington 6, D. C.
Elliott, Herbert L. (47)
Alcazay Hotel, Kansas City 2, Mo.
Ellis, Bruce (47)
231 Waldon Bldg., Little Rock, Ark.
Ellis, Donald E. (47)
305 N. Meramec Ave., Clayton 5, Mo.
Ellis, Dorothy A. (48)
2102 Cornell Rd., Cleveland 6, Ohio.
Ellis, Herschel W. (47)
Onida, S. Dak.
Ellis, Leon C. (19)
608 Essex St., Lynn, Mass.
Ellis, Lillian H. (48)
1125 N. Waverly Pl., Milwaukee, Wis.
Ellis, Thomas C. (45)
1900 Desire, New Orleans, La.
Ellovich, Phillip (46)
118 E. State St., Sharon, Pa.
Elm, J. George (46)
132 Ohio River Blvd., Pittsburgh 2, Pa.
Elmadjian, Fred (46)
Worcester State Hospital, Worcester 5, Mass.
Elmer, Louis R. (47)
2255 Franklin, Toledo 10, Ohio.
Elmore, Paul R. (47)
419—6th St., Petaluma, Calif.
Else, Floyd W. (46)
c/o Else Drug Co., Elm Creek, Nebr.
Elson, John R. (45)
Elson's Inc., Enka, N. C.
Elwers, George E. (41)
104 W. Wisconsin Ave., Neenah, Wis.
Emanuel, Glenn N. (47)
Veterans Administration Hospital, Box 308, Wilmington, Del.
Emanuel, Monroe (48)
691 Linden Blvd., Brooklyn 3, N. Y.
Emanuelli, Luis R. (45)
Box 25, Fajardo, Puerto Rico.
Emch, Bess G. (39)
2707 Cheltenham Rd., Toledo, Ohio.
Emch, Garrett F. (44)
2707 Cheltenham Rd., Toledo 6, Ohio.
Emerick, Bernard M. (49)
39 S. Meade, Wilkes Barre, Pa.
Emerson, James M. (48)
994 N. Watkins St., Apt. 5, Memphis, Tenn.
Emerson, O. R. (44)
100 S. Main St., Brownstown, Ind.
Emerson, Ralph W. (44)
Island Falls, Me.
Emerson, Robert L. (45)
17141 Via Arriba, San Lorenzo, Calif.
Emery, Byron E. (40)
9155 Silveira Ave., Hayward, Calif.
Emig, Herbert M. (27)
808 S. Wood St., Chicago 12, Ill.
Emma, Frank A. (49)
1608 Gibson Rd., Utica, N. Y.
Emma, P. Armando (49)
308 Odell Ave., Endicott, N. Y.
Emrich, William (24)
201 Liberty St., Orlando, Fla.
Ens, Walter R. (45)
601 Masonic Ave., San Francisco 17, Calif.
Encarnacion, Natalio (45)
P. O. Box 671, Mayaguez, Puerto Rico
Endich, Martin (46)
253 Woodland Ave., Columbus 3, Ohio.
Endriss, William A. (43)
10206 Lorain Ave., Silver Spring, Md.
Engebretson, Duane H. (49)
819 Fifth St., Devils Lake N. Dak.
Engebretson, E. (18)
Devils Lake, N. Dak.
Engebretson, Glenn E. (49)
819 Fifth St., Devils Lake, N. Dak.
Engeldinger, Frederick V. (44)
217 E. Main, Hillsboro, Oreg.
Englehart, Ida M. (45)
338 Yew Pl., Harrisburg, Pa.
Englehart, Richard T. (47)
338 Yew Pl., Taylor Park, Harrisburg, Pa.
Engleman, Erna (46)
3532 W. Villard, Milwaukee 9, Wis.
English, Harrison C. (49)
1326 Wright St., Reno, Nev.
ENGSTROM, ERNEST O. (06)
National Bank Bldg., Federal & Milk St., Boston, Mass.
Enix, Ralph (48)
707 S. 6th St., Kingfisher, Okla.
Enloe, Van P. (41)
P. O. Box 366, Rome, Ga.
Enright, Mary C. (43)
210 Thurman Ave., Columbus, Ohio.
Ensman, James F. (49)
1562 Jermain Dr., Toledo 6, Ohio.
Ent, Paul M. (43)
4 Delaware Ave., Milford, N. J.
Enz, Walter W. F. (27)
The Upjohn Company, Kalamazoo, Mich.

Episcopo, Harry (48)
481 Hamilton Ave., Trenton 10, N. J.
Epperson, Robert J. (46)
225 S. 5th, Box 89, Waco, Tex.
EPPLEY, JOSEPH A. (19)
S. W. Cor. 15th & Westmoreland Sts., Philadelphia, Pa.
Epstein, Albert K. (26)
5 S. Wabash Ave., Chicago 3, Ill.
Epstein, Alex (47)
573 King St., Charleston 12, S. C.
Epstein, Elias (45)
2911 Atlantic Ave., Brooklyn 7, N. Y.
Epstein, George (44)
111 N. Canal St., Box 8610A, Chicago, Ill.
Epstein, Hyman J. (45)
926—47th St., Brooklyn, N. Y.
Erb, Robert L. (46)
3537 Dover St., Los Angeles 26, Calif.
Erck, Ruth E. (47)
3832 W. North Ave., Milwaukee 8, Wis.
Erdeljon, Charles (47)
425 Gheens Ave., Louisville 8, Ky.
Erdos, Jose (47)
Sena 22-3 Col Cuauhtemoc, Mexico, D. F.
Erickson, Ira A. (49)
6559 Whitehead, Detroit 10, Mich.
Erickson, Ralph C. (46)
2101 Tower Ave., Superior, Wis.
Erion, Robert A. (47)
2624 Garland Ave., Cincinnati 9, Ohio.
Ermilio, Michael A. (48)
1822 S. 16th St., Philadelphia 45, Pa.
Ern, Victor O. (46)
602 Stuyvesant Ave., Irvington 11, N. J.
Ernst, Gordon (47)
1639 Broadway, Toledo 9, Ohio.
Ernst, M. Paul (40)
1801 Market St., Harrisburg, Pa.
Escabi, Rodolfo S. (46)
Univ. of Puerto Rico, College of Pharmacy, Rio Piedras, Puerto Rico.
Escalera, Rosanilda (49)
Box 141, Guayama, Puerto Rico.
Escavage, Freda (49)
3820 E. 149th St., Cleveland 20, Ohio.
Esecover, B. (32)
439 Stone Ave., Brooklyn, N. Y.
Espey, Kermit M. (44)
1016 Mound St., Cincinnati 3, Ohio.
Esposito, Virginia (46)
518 Second St., Brooklyn 15, N. Y.
Esser, Bernard S. (47)
205 Jefferson St., Washington, Mo.
Esson, Ronald G. (46)
1410 Warren St., Los Angeles, Calif.
Estep, Eileen (49)
R. F. D. 1, Elizabeth, Pa.
Estlack, Walter F. (47)
4111 Baltimore Ave., Philadelphia, Pa.
Estrin, David I. (49)
52—0 St., N. W., Washington, 1, D. C.
Eten, Frank X. (47)
119 Westwood Ave., Westwood, N. J.
Etheridge, S. B. (47)
169 W. Main St., Washington, N. C.
Etherington, Beverly S. (46)
331 N. Oakland Ave., Indianapolis 1, Ind.
Etherington, Marshall D. (46)
331 N. Oakland Ave., Indianapolis 1, Ind.
Eto, George S. (47)
10301 St. Charles Rd., St. Louis 14, Mo.
Ettinger, Cyrus (47)
559 Kings Highway, Brooklyn 23, N. Y.
Eudowe, Saul W. (47)
1175 Chapel St., New Haven 11, Conn.
Euler, Charles N. (47)
308 S. 19th, La Crosse, Wis.
Evander, Neil E. (48)
15 N. Madison, Walla Walla, Wash.
Evans, Alberta B. (48)
c/o Davis Pharmacy, Titusville, Fla.
Evans, Andrew M. (48)
Route, 4, Grove Rd., Greenville, S. C.
Evans, Brinley O. (47)
5628 Elgin Ave., Pittsburgh 6, Pa.
Evans, C. Albert (47)
c/o Evans Pharmacy, 207 W. High St., Ebensburg, Pa.
Evans, C. K. (48)
238 Main, Salinas, Calif.
Evans, Charles H. (34)
218 Main St., Warrenton, Ga.
Evans, Charles H., Jr. (42)
Warrenton, Ga.
Evans, Charles S. (49)
577 N. Clinton Ave., Trenton 9, N. J.
Evans, Don S. (38)
701 N. Orange Ave., Orlando, Fla.
Evans, Howell B. (46)
1223 St. Roch Ave., New Orleans, La.
Evans, James H. (49)
601 N. Orange, Orlando, Fla.
Evans, Junius A. (41)
Crockett Bldg., Las Vegas, N. Mex.
Evans, Lenwood M. (47)
786 Myrtle Ave., Brooklyn 6, N. Y.
Evans, Orlie C. (40)
15350 Coyle Ave., Detroit 27, Mich.
Evans, Robert V., Jr. (48)
1845 C. St., Lincoln 2, Nebr.
Evans, Shirley J. (46)
Box 511, Winnsboro, La.
Evans, William E., Jr. (45)
1205 Wyoming Ave., Forty Fort, Pa.
Evans, William J. (45)
Evans Pharmacy, W. Broadway, Cape Girardeau, Mo.
Evanson, Robert V. (47)
FPHA Apt. 231-4, West State St., West Lafayette, Ind.
Everett, Charles A. (46)
1720 Dartmouth, Alexandria, La.
Everett, Clarence J. (48)
209 Front St., Danville, Pa.
Everett, Paul H. (48)
971 Hilyard, Apt. 1, Eugene, Oreg.
Everly, Fred M. (43)
Fairfax, Va.
EWÉ, GEORGE E. (19)
1588 Beacon St., Brookline 46, Mass.
Ewing, Clare O. (19)
United Rexall Drug Co., 3901 N. Kingshighway, St. Louis, Mo.
Exler, Samuel H. (49)
2304 Wichita Ave., Baltimore 15, Md.
Eyres, Ethel W. (45)
2200 Nichols Ave., S. E., Washington 20, D. C.

## F

Fadgen, M. Joseph (44)
1552 Gorsuch Ave., Baltimore, Md.
Fahmy, Ibrahim Ragab (47)
Faculty of Medicine, Fouad 1st University, Kasr-El-Aimi, Cairo, Egypt.
Fahrer, S. S. (47)
Irvington Estates, Bldg. 8, Apt. 3A, Irvington, N. Y.
Fahrner, Raymond C. (47)
412 Nicholson St., Joliet, Ill.
Fahrney, Frederick W. (49)
1213 Potomac Ave., Hagerstown, Md.
Faile, H. F. (47)
P. O. Box 271, Macon, Ga.
Failer, Jay Lewis (44)
240 Fifteenth Ave., Columbus 1, Ohio.
Failla, Joseph S. (48)
2615 Stanford Gar, Apt. Houston 6, Tex.
Faille, Arthur (48)
388 St. Paul W., Montreal 1, P. Q., Canada.
Faircloth, Allen J. (47)
Ivor, Va.
Falck, Sylvan B. (46)
715 Seeley Rd., Syracuse 3, N. Y.
Falcon, Howard J. (46)
Box 337, Delray Beach, Fla.
Falcone, Rita E. (47)
121 N. 12th St., Connellsville, Pa.
Fales, Jane P. (48)
Univ. of Calif. College of Pharm., San Francisco 22, Calif.
Falk, Chas. F. (20)
601 First Ave., Two Harbors, Minn.
Falk, Herbert B. (31)
625 E. 27th St., Paterson 4, N. J.
Falkenhainer, Clarence P. (46)
1097 University Ave., Dubuque, Iowa.
Fallon, Michael J. (46)
271 Washington St., Wellesley Hills, 82, Mass.
Falzine, Esther (47)
7013 Clinton Ave., Cleveland 2, Ohio.
Famular, Paul P. (36)
195 Woodland Ave., Ramsey, N. J.
Fancher, Robert L. (45)
4602 Finley Ave., Los Angeles 27, Calif.
Fankhauser, John C. (49)
V. M. C. A., Wichita 2, Kans.
Fantasia, Edward M. (45)
Quincy City Hospital, Quincy 69, Mass.
Farber, Bernard (47)
125 Johnson Ave., Newark 8, N. J.
Farber, Edward N. (47)
4215 W. North Ave., Milwaukee 8, Wis.
Farber, Joe (46)
722 S. Western Ave., Los Angeles 5, Calif.
Farber, Kenneth (48)
449 Avenue C., Bayonne, N. J.
Farber, M. Howard (46)
319 S. Vermont Ave., Los Angeles 5, Calif.
Fares, Joseph N. (47)
3445 Nile St., San Diego 4, Calif.
Farhi, Ezra E. (47)
P. O. B. 763, Beyrouth, Lebanon.
Farmer, Joseph B. (46)
2129 Brookside Ave., Indianapolis 18, Ind.
Farnham, Donald B. (48)
Lane-Rexall Drug Store, La Grange, Ga.
Farrell, Thomas R. (31)
101 W. 31st St., New York 1, N. Y.
Farrell, William J. (48)
732 W. Oak St., Ludlow, Ky.
Farrens, Guy H. (46)
235 S. 2nd E., Apt. 306, Salt Lake City, Utah.
Farrington, Owen P. (44)
Lock Box 251, Alliance, Nebr.
Farris, William L. (45)
Box 355, Allapattah Station, Miami 42, Fla.
Farwell, Kenneth B. (45)
c/o Drug Store, Stayton, Oreg.
Fastenow, W. C. (47)
606—2nd St., Webster City, Iowa.
Fatica, Mario M. (49)
520 Wales Ave., New York 55, N. Y.
Fatig, Maryan (45)
P. O. Box 521, Newark, Ohio.
Fatt, Homer (45)
3530—39th St., N. W., Washington, 16, D. C.
Faulkner, John G. (46)
254 Paseo De Granada, Redondo Beach, Calif.
Fausnaught, James C. (20)
8 Sudbury St., Worcester, Mass.
Faust, Earl C. (46)
701 Main St., Scalp Level, Pa.
Favilla, Cora M. (48)
1166 Montgomery, San Francisco 11, Calif.
Faxon, H. D. (20)
McKesson & Robbins, Inc., P. O. Box 57, Kansas City 10, Mo.
FECHNER, OSCAR (45)
114 Westervelt Ave., Tenafly, N. J.
Fedec, Stephen (48)
R. D. 2, Phoenixville, Pa.
Feder, Irwin C. (47)
1303 Meridian Ave., Miami Beach, Fla.
Feehan, Marsh M. (48)
916—7th Ave., Lewiston, Idaho.
Feeney, William J. (46)
255 Hamilton St., Albany, N. Y.
Feicht, Albert J., Jr. (48)
22027 S. Figueroa, Torrance, Calif.
Feider, Sophia (48)
1830-1/4 Lucile Ave., Los Angeles 26, Calif.
Feiertag, Lester A. (46)
213 Dorchester, Waukegan, Ill.

Feigenbaum, Leonard (46)
2985 Ocean Pkwy., Brooklyn 24, N. Y.
Feiler, William A. (48)
1307 Park Ave., Paducah, Ky.
Feinberg, Jacob B. (46)
659 Newark Ave., Jersey City 6, N. J.
Feinberg, Seymour H. (46)
3 Stuyvesant Oval, Apt. 1-H, New York 9, N. Y.
Feinerman, Louis (48)
306 Oakwood Ave., Orange, N. J.
Feinstein, Kurt (38)
13 Bettingerstrasse, Riehen/Basle, Switzerland.
Feit, Victor E. (36)
1469 Randolph, Apt. 8, St. Paul, Minn.
Feldberg, Daniel (45)
241 Avon Ave., Newark 8, N. J.
Feldberg, Michael A. (48)
241 Avon Ave., Newark 8, N. J.
Felder, George M. (47)
83 Ashley Ave., Charleston 6, S. C.
Feldman, Albert (43)
2800 Woodley Rd., N. W., Washington 8, D. C.
Feldman, Albert A. (45)
16703 Hamilton Ave., Detroit 21, Mich.
Feldman, Albert E. (48)
250 Senator Pl., Cincinnati 20, Ohio.
Feldman, David (47)
Jewish Memorial Hospital, 196th St. & Broadway, New York 34, N. Y.
Feldman, Israel (46)
955 Sheridan Ave., Bronx 56, N. Y.
Feldman, Julian J. (49)
15532 Crenshaw Blvd., Gardena, Calif.
Feldman, Milton (46)
c/o Rhode Island Pharmacy, 1830 First St., N. W., Washington, D. C.
Feldman, Zigmund (48)
1937 E. 16th St., Brooklyn, N. Y.
Felker, Wilbur S. (49)
686 E. Passaic Ave., Bloomfield, N. J.
Fellows, Edwin J. (47)
Smith, Kline & French Laboratories, 15th & Spring Garden Sts., Philadelphia, Pa.
Felmeister, A. (46)
145 Kensington Ave., Jersey City 6, N. J.
Felmeister, Adelyn D. (45)
145 Kensington Ave., Jersey City 6, N. J.
Felske, Irving F. (45)
1111 Pizarro St., Coral Gables, Fla.
Felt, George E. (48)
c/o Wray's Pharmacy, Haines City, Fla.
Felter, William C. (49)
504 Woodlark Bldg., Portland 5, Oreg.
Feltman, Philip D. (47)
1143 Farmington Ave., Hartford 7, Conn.
Felton, Philip (44)
3 West End Ct., Brooklyn 29, N. Y.
Femiano, Joseph R. (46)
1850 59th St., Brooklyn 4, N. Y.
FENGER, FREDERIC (10)
c/o Armour and Co., U. S. Yards, Chicago, Ill.
Fenney, Nicholas W. (38)
62 Broadfield Rd., Hamden, Conn.
Fenstermaker, D. E. (49)
The DeVilbiss Co., Toledo 1, Ohio.
Fenters, George L., Jr. (49)
209 Laura St., Jacksonville 4, Fla.
Fenton, Francis
319 S. 9th Ave., Maywood, Ill.
Ferber, Herbert B. (46)
221 E. Clarke St., Milwaukee 12, Wis.
Ferber, Hyman (35)
1331 Mace Ave., New York, N. Y.
Ferderber, Julius (46)
40-04 25th Ave., Long Island City 3, N. Y.
Ferguson, Dwight L. (47)
Vet. Adm. Facility, Bay Pines, Fla.
Ferguson, Harry C. (49)
427 E. Virginia, Tucson, Ariz.
Ferguson, Hugh (48)
240 Pierce, West Lafayette, Ind.

Ferguson, Noel M. (37)
School of Pharmacy, Univ. of Houston, 3801 St. Bernard, Houston 4, Tex.
Ferko, Joseph A. (45)
500 W. Glenwood Ave., Philadelphia 40, Pa.
Ferlauto, Robert J. (46)
1530 Spring Garden St., Philadelphia 30, Pa.
Fernalld, Maybelle (40)
2425 Eye St., Sacramento 16, Calif.
Fernandez, Martin E. (43)
804 Arizona, #8, El Paso, Tex.
Ferrante, Joseph S. (46)
233 Lakeview Ave., Clifton, N. J.
Ferrante, S. Joseph (49)
330 Passaic St., Passaic, N. J.
Ferrara, Andria (48)
838 S. Miller, Chicago 7, Ill.
Ferrara, Lucien A. (47)
124 Stryker St., Brooklyn 23, N. Y.
Ferrari, Heriberto (45)
P. O. Box 290, Aguadilla, Puerto Rico.
Ferrari, Jose R. (45)
P. O. Box 290, Aguadilla, Puerto Rico.
Ferraro, Ignazio S. (43)
98 Beech St., Paterson, N. J.
Ferring, Lawrence F. (33)
Xavier University, Washington & Pine Sts., New Orleans, La.
Ferron, W. E. (46)
201 Fremont St., Las Vegas, Nev.
Ferruolo, Albert (46)
110 Jackson St., Lawrence, Mass.
Ferry, Clayton W. (48)
345 Grand View Blvd., Tuckahoe 7, N. Y.
Ferstman, Ben (47)
2806 W. 9th St., Los Angeles 6, Calif.
Fessler, George B. (45)
505 Superior Ave., Sheboygan, Wis.
Feucht, Paul H. (49)
1931 Sherman Ave., Evanston, Ill.
Feuer, Irving S. (48)
3109 Harvey Ave., Cincinnati, Ohio.
Feurt, Seldon D. (46)
Hamilton, Mo.
Fialk, Samuel L. (47)
198 Hopkins Ave., Jersey City 6, N. J.
Fialka, Audrey Jo (45)
205 Brooks St., Missoula, Mont.
Fiddes, R. Kenneth (48)
10738 Wayburn Ave., Detroit 24, Mich.
Field, Edward K. (22)
18047 Washburn Ave., Detroit, Mich.
Field, J. W. (44)
27 Main, Hinsdale, N. H.
Fielder, Horace S. (47)
4726 Swiss Ave., Dallas, Tex.
Fields, Paul H. (46)
216 E. 15th St., Bloomington, Ind.
Fienup, Ralph (47)
4319 Roland St., Normandy, Mo.
Fiero, George W. (26)
c/o Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
Fifer, Howard D. (45)
College of Pharmacy, University of California, 1st & Parnassus, San Francisco 22, Calif.
Fifield, Orval W. (46)
6729 Kennedy Ave., Hammond, Ind.
Figlio, Daniel (49)
924 S. Farragut Ter., Philadelphia 4, Pa.
Filmanowicz, Stanley V. (46)
2600 E. 87th St., Chicago 17, Ill.
Filomena, Gennaro A. (43)
48 Revere St., Revere, Mass.
Finch, Suzanne (50)
33 W. Winona, Norwood, Pa.
Fincher, Ellis M. (48)
Route 2, Union, S. C.
Findlay, Colin L. (48)
Box 421, Lafayette, Calif.
Fine, Harry J. (42)
200 E. 51st St., Chicago, Ill.
Fineman, Bill L. (47)
2735 Buena Vista, W., Detroit, Mich.
Fink, Francis T. (48)
824 E. 33rd St., Baltimore 18, Md.

Fink, Myron (44)
10 E. 55th St., New York, N. Y.
Fink, Orval R. (49)
207 Second St., Manning, Iowa.
Fink, William T. (44)
1429 Fisher Ave., Philadelphia 41, Pa.
Finke, Emerson L. (44)
3526 Wallwerth Dr., Toledo 12, Ohio.
Finkelstein, Harold (45)
1313 S. Troy St., Chicago 23, Ill.
Finkelstein, Harry (46)
820—14th St., N., Fargo, N. Dak.
Finkelstein, Murray (46)
Dept. Pharmacology, 1335 H. St., N. W., Washington 5, D. C.
Finlay, George, Jr. (45)
Farmacia Olimpo, Santurce, Puerto Rico.
Finley, George M. (47)
c/o City Drug Co., Lawrenceburg, Tenn.
Finley, James A. (46)
11 Public Sq., Lawrenceburg, Tenn.
Finley, Paul R. (48)
4221 Bend Ave., Fresno 2, Calif.
Finn, Ruthe J. (45)
100 Huntington Ave., Boston, Mass.
FINNERAN, JAMES F. (06)
10 Otis St., Everett, Mass.
Finney, Frank R. (48)
2718 Bowhill Lane, San Pablo, Calif.
Finney, Hariet B. (45)
555 Fifth St., Clairton, Pa.
Finney, John M. (47)
Morley, Mo.
Fiorella, Nicholas P. (44)
62 Ivy Lea, Kenmore 17, N. Y.
Fiorille, Joseph (48)
208 N. Division St., Ann Arbor, Mich.
Fioto, George (39)
410 Count St., Brooklyn, N. Y.
Firemark, Samuel (47)
229-23 Merrick Rd., Laurelton 13, N. Y.
FISCHELIS, R. P. (11)
Westchester Apartments, 4000 Cathedral Ave., N. W., Washington, D. C.
Fischer, Arthur L. (48)
420 Union Central Bldg., Cincinnati 2, Ohio.
Fischer, Charles R. (47)
1636 C John St., Evansville 14, Ind.
Fischer, Earl B. (36)
4921 Fremont Ave., S., Minneapolis, Minn.
Fischer, Louis (30)
College of Pharmacy, University of Wash., Seattle, Wash.
Fischer, Ralph J. (45)
Lafayette, Alma, Mo.
Fischer, Raymond W. (46)
9 Yorktown Ter., Livingston, N. J.
FISCHL, LOUIS J. (37)
411—30th St., Oakland 9, Calif.
FISH, ERWIN L. (18)
Arcade, N. Y.
Fish, Reuben (47)
920 N. Parkway, Memphis 7, Tenn.
Fisher, A. Lee (46)
Box 21, Route 1, Osborn, Ohio.
Fisher, Albert (47)
3037 Monterey, Detroit 6, Mich.
Fisher, Dana J. (46)
1949½ Huntington Dr., South Pasadena, Calif.
Fisher, Jack L. (48)
2 Oakland Pl., Brooklyn 26, N. Y.
Fisher, John N. (47)
Route 1, Box 95A, East Carondelet, Ill.
FISHER, LEROY T. (28)
3004 Lee Highway, Apt. D431, Arlington, Va.
Fisher, N. (45)
863 Cole St., San Francisco 17, Calif.
Fisher, Robert B. (46)
c/o W. T. Rawleigh Co., 101-23 S. Liberty Ave., Freeport, Ill.
Fisher, Robert G. (49)
225½ E. Crawford Ave., Connellsville, Pa.
Fisher, Robert T. (47)
617½—11th Ave., S., Clinton, Iowa.
Fisher, Sidney G. (43)
933 Greenfield Ave., S. W., Canton 6, Ohio.

Fishwild, Dale C. (49)
307 E. Webster, Ferndale 20, Mich.
Fisk, Frank B. (17)
5430 N. New Jersey Ave., Indianapolis 5, Ind.
Fiske, A. Hastings (27)
c/o Eli Lilly & Co., Indianapolis, Ind.
Fiske, Russell H. (43)
1200 E. Broad St., Medical College of Va., Richmond, Va.
Fitch, Francis C. (44)
642 Union St., Indianapolis 4, Ind.
Fitch, Robert A. (45)
143 Euclid Ave., Kenmore 17, N. Y.
Fite, G. Carlton (45)
220 S. Wall, Calhoun, Ga.
Fitzgerald, John L. (47)
Waverly, Mo.
Fitzpatrick, Thomas C. (46)
33 W. Huron St., Pontiac 15, Mich.
Fitzpatrick, William (43)
1219 N. Rural St., Indianapolis, Ind.
Fitzsimmons, Milton J. (48)
Main St., Ellicott City, Md.
Fitz-Simon, Vincent J. (39)
24 Parkis Ave., Providence, R. I.
Fjone, Merdes B. (47)
Gundersen Clinic, La Crosse, Wis.
Flack, Herbert L. (43)
Jefferson Medical College Hospital, 10th & Sansom St., Philadelphia 7, Pa.
Flaherty, Francis A. (46)
724 Western Ave., Lynn, Mass.
Flaherty, J. E., (47)
5026 W. Erie St., Chicago 44, Ill.
Flanagan, Edward, Jr. (47)
365 E. Washington St., Trenton 9, N. J.
Flanagan, T. Arthur (41)
160 Maple Ave., Kingston, Pa.
Flaugher, Earl W. (48)
2806 Collis Ave., Huntington, W. Va.
Flaum, Philip (45)
25 Westminister St., Fitchbury, Mass.
Fleenor, Lloyd F., Sr. (47)
103-43—106th St., Ozone Park, L. I., 16, N. Y.
Fleischer, Alfred J. (47)
50 East Ave., Ebenezer, N. Y.
Fleischer, Howard E. (43)
973 Parker Blvd., Kenmore 17, N. Y.
Fleischner, Nathan (48)
343 Franklin Ave., Nutley 10, N. J.
Fleishman, Moritz H. (48)
Main St., Loleta, Calif.
Fleming, Daniel R. (49)
13030 Mack, Detroit 15, Mich.
Fleming, F. W. (44)
Western Wholesale Drug, Ltd., Vancouver, British Columbia, Canada.
Fleming, Morris (48)
433 Norfolk Ave., Norfolk, Nebr.
Fleming, William J. (49)
136 Pine St., Brookville, Pa.
Fletcher, George F. (46)
1101 S. Main Ave., Scranton 4, Pa.
Fletcher, Gilbert W. (42)
324 S. State St., Ann Arbor, Mich.
Fletcher, J. Morgan (46)
c/o Memorial Hospital, P. O. Box 5008, Corpus Christi, Tex.
Fletcher, Myrtle Florence (45)
30 Atlas St., Apt. 5, Akron 3, Ohio.
Flint, Francis C. (47)
319 S. Main St., Washington, Pa.
Florance, Richard K. (45)
53 Howard, Pompton Lakes, N. J.
Florea, Robert E. (49)
77 E. Fifth St., London, Ohio.
Florentine, Anthony A. (48)
64 Beech St., Belleville 9, N. J.
Florenzie, Oscar H. (20)
942 Summit Ave., Jersey City, N. J.
Florenzie, Oscar W. (41)
262 Hutton St., Jersey City, N. J.
Flores, Octavio F. (48)
1023 W. 24th St., Los Angeles 7, Calif.
Floyd, Thomas A. (47)
3804 N. Illinois St., Indianapolis 8, Ind.
Foertmeyer, Samuel C. (47)
823 Grand Ave., Buena Park, Calif.

Fogelson, William E. (49)
Ridge Rd., Rumson, N. J.
Foley, Eileen (45)
503 Central Ave., Lafayette, Ind.
Foley, Mrs. James B. (49)
6436 N. Williams Ave., Portland 11, Oreg.
Foley, Paul W. (47)
2045 W. State St., Milwaukee 3, Wis.
Folkrod, Cyril C. (47)
10609 S. California Ave., Chicago 43, Ill.
Follis, Norman L. (47)
6411 Superior Ave., Cleveland 3, Ohio.
Folmer, Eugene J. (47)
10743 Calumet Ave., Chicago 28, Ill.
Foltz, Calvin M. (47)
26 Church St., Ephrata, Pa.
Foltz, Terry L. (42)
18 E. 2nd St., Hutchinson, Kans.
Fomalont, Julius (47)
902 Fayette St., Conshohocken, Pa.
Fonda, Howard B. (37)
Burroughs Wellcome & Co. Inc., Tuckahoe, N. Y.
Fonda, Lyman D. (46)
64 Mountainview Rd., Millburn, N. J.
Fonder, Winfred O. (43)
514 Melrose Ave., Green Bay, Wis.
Fong, M. Q. (45)
590 Lake Park Ave., Oakland, Calif.
Fong, William H. (48)
1372 Sacramento St., San Francisco 9, Calif.
Fontoura, Candido (47)
129 Caetano Pinto, São Paulo, Brazil, S. A.
Foote, Bernard A. (42)
480 Main St., Archbald, Pa.
Foote, Frank A. (46)
954 E. 4th St., Long Beach 2 Calif.
FOOTE, PERRY A. (29)
School of Pharmacy, Univ. of Florida, Gainesville, Fla.
Foran, Ralph R. (19)
1082 Hillside Ave., Plainfield, N. J.
Forbes, Walter R. (47)
1295 Bardstown Rd., Louisville 4, Ky.
FORD, MYRON N. (05)
1010 Wyandotte Bldg., 21 W. Broad St., Columbus, Ohio.
Ford, Wilbur S. (41)
1109 Main St., Oconto, Wis.
Fordham, C. C., Jr. (40)
514 S. Elm St., Greensboro, N. C.
Fordham, Leonard D. (49)
1561 Montreat Ave., S. W., Atlanta, Ga.
Fore, Allen N. (46)
308 Second Ave., Farmville, Va.
Foreman, E. Leon (47)
115 Palmetto Dr., Alhambra, Calif.
Foreman, Harold (49)
Town Pharmacy, Collins Ave., Miami Beach, Fla.
Forgy, Byron L. (49)
Drakesburg, Ky.
Forim, Leo I. (38)
13 Ridge Ave., Bloomfield, N. J.
Form, Isidore (48)
165 W. 87th, New York, N. Y.
Forman, Doris S. (45)
523—5th Ave., Brooklyn 15, N. Y.
FORSLUND, HERMAN C. (35)
School of Pharmacy, Oregon State College, Corvallis, Oreg.
Forster, C. A., (49)
143 N. Water, Milwaukee 1, Wis.
Forsyth, James H. (47)
8209 Georgia Ave., Box 322, Silver Spring, Md.
Forsyth, T. R. (48)
3131 Middlefield Rd., Redwood City, Calif.
Forsythe, John L. (46)
W. Main St., Millheim, Pa.
Fortenberry, James W. (46)
267 Dalzell, Shreveport, La.
Forth, Patricia (49)
628 Mandalay, Clearwater Beach, Fla.
Fottino, Salvatore M. (46)
511 Main St., Sharpsburg, Pa.
Fortun, Roy A. (41)
Whitehall, Wis.
Fosbinder, Russel J. (36)
250 High St., Newark, N. J.

FOSS, NOEL E. (31)
School of Pharmacy, Univ. of Md., 32 S. Greene St., Baltimore 1, Md.
Fossett, William E. (31)
168 S. E. 1st St., Miami, Fla.
Foster, Carroll P. (44)
6327 Belair Rd., Baltimore 6, Md.
Foster, Dennison D. (49)
230 E. Broadway, Alton, Ill.
Foster, James L. (47)
2342 Adams, Granite City, Ill.
Foster, Shirley L. (46)
514 N. Lake St., Madison 6, Wis.
Foster, Thomas A. (43)
U. S. Public Health Service, Bethesda Station, Washington 25, D. C.
Fouch, Ralph F. (25)
Williams, Calif.
Fouldrod, Samuel W., Jr. (43)
1500 Walnut St., Philadelphia 2, Pa.
Foulk, H. O. (46)
936 Roger St., Bucyrus, Ohio.
Foulser, Stanley W. (48)
394—14th Ave., Columbus 1, Ohio.
Fournier, Mr. Aime E. (49)
59 Main St., Stafford Springs, Conn.
Foutz, John C., Jr. (46)
Box 25, Pimento, Ind.
Fowler, G. Ross (35)
Apt. #107, 629 S. Serrano Ave., Los Angeles 5, Calif.
Fowler, Jack K. (48)
727 Lafayette, Ravenna, Ohio.
Fox, Alexander (45)
334 Watertown St., Newton 58, Mass.
Fox, James H. (47)
Box 696, Asheboro, N. C.
Fox, Jos. G. (49)
1112 Elm St., Manchester, N. H.
Fox, Lauretta E. (48)
410 Government St., Gainesville, Fla.
Fox, Nicholas (46)
Spalding, Nebr.
Fox, Orrin P. (47)
1132 N. Vernon, Dearborn, Mich.
Fox, Ralph S. (48)
313 Diamond, Philadelphia 22, Pa.
Fox, Sereck Hall (21)
9425 Grinnell Ave., Detroit 13, Mich.
Fox, Solomon (45)
56 Phillips St., Boston 14, Mass.
Fox, Thomas H. (49)
1201 Lincoln Rd., Miami Beach 39, Fla.
Foxholm, Carl A. (47)
Route 3, Box 612, Racine, Wis.
Foy, Donald J. (48)
3024 S. Broad St., Trenton 10, N. J.
Foyle, Hilton P. (46)
3950 Kicajon Blvd., San Diego 5, Calif.
Fraher, John T. (45)
124 Broad St., Lynn, Mass.
Fraiberg, Harry (40)
16900 Detroit Ave., Lakewood 7, Ohio.
Frailey, Carson P. (34)
507 Albee Bldg., Washington 5, D. C.
Frampton, Susan C. (45)
809 Market St., Mt. Ephraim, N. J.
Francis, Harvey M. (47)
1504½ Crescent Dr., Tyler, Tex.
Francisco, Charles H. (46)
2000 Van Ness Ave., San Francisco, Calif.
Francke, Don E. (37)
University Hospital, Ann Arbor, Mich.
Franco, Salvatore T. (47)
995 Rogers Ave., Brooklyn 26, N. Y.
Frank, Alfred S. (45)
16 Santa Barbara Ave., San Anselmo, Calif.
Frank, Benjamin (46)
105-09—63rd St., Forest Hills, Queens, N. Y.
Frank, Harvey P. (41)
Philadelphia College of Phar. & Science, 43rd & Kingsessing Ave., Philadelphia 4, Pa.
Frank, Howard (48)
2 Lake Ave., Tuckahoe, N. Y.
Frank, Jacqueline E. (46)
R. D. 1, Tarentum, Pa.
Frank, Otto (47)
4777 S. Packard Ave., Cudahy, Wis.

Frank, Robert (49)
Powers Lake, N. Dak.
Franke, Edward L. (47)
2425 Donner, Sacramento 17, Calif.
Franke, Norman H. (49)
5210 N. Marshall St., Philadelphia 20, Pa.
Frankel, Israel (47)
68 Throop Ave., Brooklyn 6, N. Y.
Frankfurter, Fred S. (39)
171 E. Post Rd., White Plains, N. Y.
Franklin, Roy (45)
P. O. Box 248-3, Hawthorne, Nev.
Frankowski, Mathew H. (22)
1706 La Porte Ave., Whiting, Ind.
Fransen, Ray, (49)
Lovell, Wyo.
Fransen, Ted L. (47)
32 Campus Dr., Pocatello, Idaho.
Frantz, David W. (44)
5824 Webster St., Philadelphia 43, Pa.
Franzen, Roy A. (46)
1110 Main St., Brockton 37, Mass.
Franzoni, F. Royce (37)
316 S. Garfield St., Arlington, Va.
Frascella, Thomas (44)
1202—10th Ave., Neptune, N. J.
Fraser, Muriel (45)
Memorial Hospital, Niagara Falls, N. Y.
Fraser, William F. (47)
28 S. Main, Helper, Utah.
Fraser, William M. (49)
1708 Union, McKeesport, Pa.
Frasier, Paul A. (46)
Box 343, Philadelphia, Miss.
Frates, George H. (41)
1163 National Press Bldg., Washington 4, D. C.
FRAUENHOFF, FREDERICK L. (09)
255 Plum St., Aurora, Ill.
Frautschi, Arthur C. (47)
3501 Upton Ave., Toledo, Ohio.
Frawley, Francis A. (47)
Maine St., Bangor, Me.
Frazier, Henderson S. (49)
623 W. 38th St., Norfolk, Va.
Frazier, Walter M. (43)
816 Snowhill Blvd., Springfield 32, Ohio
Fredell, Walter G. (42)
c/o Lambert Pharmacal Co., St. Louis, Mo.
Frederick, Leslie P. (48)
609—7th St., N. W., Puyallup, Wash.
Frederick, Victor W. (49)
Veterans Adm. Hosp., Walla Walla, Wash.
Frederickson, Benjamin F. (49)
Isle, Minn.
Frediani, Harold A. (48)
Box 908A, Route 1, Rahway, N. J.
Fredrick, George J. (47)
Hartland, Wis.
Fredricks, Bruce W. (45)
268 N. Primrose Ave., Monrovia, Calif.
Freeauf, Edward, J. (46)
Conneaut Lake, Pa.
Freed, Irving (47)
930 Whitelock St., Baltimore 17, Md.
Freed, Patti C. (44)
190-15 B 73rd Ave., Apt. 1B, Flushing, N. Y.
Freedman, Ephraim (22)
c/o R. H. Macy & Co. Inc., 34th St. & Broadway, New York 1, N. Y.
Freedman, George I. (48)
Veterans Hospital, Bedford, Mass.
FREEDMAN, MORRIS A. (34)
1530 Quarrier St., Charleston 1, W. Va.
Freeland, Byron B. (31)
Box 2560, Miami, Fla.
Freeman, Charles F. (49)
1903-B David, Austin, Texas.
Freeman, Julian D. (38)
6433—8th St., N. W., Washington 12, D. C.
Freeman, Julius E. (45)
217-24—77th Ave., Flushing, L. I., N. Y.
Freeman, Roberta (46)
1201 Schuyler St., Rome, N. Y.
Frees, Lynwood P. (47)
2554 McBride Pkwy., Great Bend, Kans.
Freese, Violet N. (49)
1043 Lincoln, Boulder, Colo.

Freiday, Don S. (46)
P. O. Box 30, Bartlesville, Okla.
Freifeld, Nathan (48)
57 E. Seaman Ave., Freeport, N. Y.
Freitag, H. Homer (41)
212 E. Cross St., Baltimore 30, Md.
Fremont, Alfred (49)
197 Bryant St., Palo Alto, Calif.
French, Joel A., Jr. (44)
c/o French's Pharmacy, 122 N. Pennsylvania, Independence, Kans.
French, Verlous J. (46)
P. O. Box 46, Jena, La.
Fretz, Charles H. (46)
532 W. Grandview, Sierra Madre, Calif.
Freud, Karl (32)
2107 Freemansburg Ave., Easton, Pa.
Frey, Clarence M., Jr. (49)
8311—5th Ave., North Bergen, N. J.
Frey, James E. (47)
3019 N. 70th St., Milwaukee 10, Wis.
Frey, Lewis L. (41)
1940 Biltmore St., N. W., Washington 9, D. C.
Fricek-Bevill, Vlasta (47)
2516 S. Troy St., Chicago 23, Ill.
Frick, Florence S. (48)
907 Elizabeth Ave., Elizabeth 4, N. J.
Fricke, Charles B. (43)
2502—13th St., Columbus, Nebr.
Fricke, Fritz A. (46)
106 S. 6th St., Plattsmouth, Nebr.
Fridrich, Raymond J. (49)
7201 S. Exchange Ave., Chicago 49, Ill.
Fried, Rose (38)
141 W. 109th St., New York 25, N. Y.
Friedberg, Alvin E. (46)
181 Rockaway Pkwy., Brooklyn 12, N. Y.
Friedenberg, Samuel (49)
383 Communipaw Ave., Jersey City 4, N. J.
Friederich, Albert (48)
392 William St., East Orange, N. J.
Friedman, Ben F. (43)
The West End Pharmacy, 107 Armstead Ave., Hampton, Va.
Friedman, Charles S. (49)
2513 Liberty Hgts. Ave., Baltimore 15, Md.
Friedman, Coleman (44)
2928 Curran Rd., Louisville 5, Ky.
Friedman, David (44)
193 Stockton St., Brooklyn 6, N. Y.
Friedman, Ely H. (48)
229 MacArthur Blvd., Oakland, Calif.
Friedman, Eugene (46)
221 Highland Ave., Trenton, N. J.
Friedman, Jacob (47)
5358 Akron St., Philadelphia 24, Pa.
Friedman, Milton (48)
115 Lenox Rd., Brooklyn 26, N. Y.
Friedman, Ned E. (46)
315 Beverly Rd., Pittsburgh 16, Pa.
Friedman, Samuel (45)
417 Warren St., Roxbury, Mass.
Friedman, Samuel L. (48)
15 N. Spring St., Elizabeth, N. J.
Friedman, Saul B. (47)
1035 Washington Ave., Brooklyn 25, N. Y.
Friedmann, Uriah M. (25)
2 Grace Ct., Apt. 6-N, Brooklyn 2, N. Y.
Fries, Edwin, R. (48)
797 Bush St., No. 206, San Francisco, Calif.
Friesen, Irvin A. (46)
R. F. D. 1, Hyattsville, Md.
Friesen, Robert (49)
929 Woodrow, Wichita 3, Kans.
Friesner, Dean (45)
Miami Valley Hospital Pharmacy, Dayton 9, Ohio.
Frisch, Frank O. (42)
430 Post St., San Francisco 2, Calif.
Friscia, Theresa R. (45)
3327 Bainbridge Ave., Bronx 67, N. Y.
Fritsch, Homer C. (41)
1009 Harvard Rd., Grosse Pointe, Mich.

Fritsche, Theodore R. (47)
376 Queen Ann Rd., Teaneck, N. J.
Fritz, Albert C. (34)
4101 E. Michigan St., Indianapolis 1, Ind.
Fritz, Paul W. (47)
497 E St., San Bernardino, Calif.
Frodema, Henry A. (46)
853 Dwight St., Springfield 4, Mass.
Frohlich, L. W. (46)
56 E. 52nd St., New York 22, N. Y.
Frohme, William A. (47)
34 Peterboro, Detroit 1, Mich.
Froiland, Dina (22)
1138 N. Leavitt St., Chicago, Ill.
Fromholtz, W. C. (43)
118 Cedar Lane, Teaneck, N. J.
Froncek, Edward J. (47)
2201 W. Oklahoma, Milwaukee 7, Wis.
Fronckowiak, Rose J. (46)
6522 Hosmer, Cleveland 5, Ohio.
Frosst, John B. (31)
P. O. Box 247, Montreal Canada.
Frost, Eldon L. (48)
Ephraim, Utah.
Frost, Joseph (46)
4621 Allott Ave., Sherman Oaks, Calif.
Frost, Walter S. (39)
Burnham Soluble Iodine Co., Auburndale 66, Mass.
Fruehan, William C. (46)
R. D. 1, Dalton, Pa.
Fry, Herman B. (49)
2228 N. E. 18th, Oklahoma City 5, Okla.
Frye, F. Lamar (47)
Greene & Coulter Sts., Philadelphia 44, Pa.
Frye, H. Clarence (44)
321 W. 11th St., Traverse City, Mich.
Fryer, Albert R. (46)
136 Bent St., Powell, Wyo.
Fuchs, Carl F. (47)
445 Elizabeth Ave., Newark 8, N. J.
Fuchs, Samuel (39)
72 Henry St., Brooklyn, N. Y.
Fudale, George M. (44)
415 Main St., Duryea, Pa.
Fugate, Harry W. (48)
Gate City, Va.
Fujii, Kiyo (44)
6035 S. Harper, Chicago 37, Ill.
Fujiki, Nobuko (47)
828 17th St., Apt. 5, Des Moines 14, Iowa.
Fujimura, Susumu S. (49)
1417 Tulare St., Fresno, Calif.
FUKA, LAWRENCE J. (41)
2002 Marshall St., Manitowoc 1, Wis.
Fullaway, Edward S. (47)
19 Concord Dr., Livingston, N. J.
Fullaway, Harold C. (46)
c/o Eli Lilly & Co. of India Inc., Bombay, India.
Fuller, Horace J. (46)
1859 Chapel St., New Haven 15, Conn.
Fuller, Wayland C. (48)
2051 Scott St., Apt. 3, San Francisco, Calif.
Fullerton, B. R. (43)
Sherman Labs, Inc., 14600 E. Jefferson Ave., Detroit, Mich.
Fullerton, J. B. (31)
Upjohn Co., Kalamazoo, Mich.
Fulmer, Thomas E. (46)
Route 2, Johnston, S. C.
Fung, Rita M. (48)
16 John St., San Francisco 11, Calif.
Funk, Lee W. (43)
731 N. High St., Columbus, Ohio.
Funk, Oscar W. (48)
1426 G St., N. W., Washington 5, D. C.
Furbee, Carl E. (43)
Furbee's Pharmacy, Bridgeport, W. Va.
Furbur, Wallace R. (46)
448 Parkdale Rd., Rochester, Mich.
Furlong, Thomas J. (49)
3915 W. Broadway, Louisville 11, Ky.
Fury, Ethel G. (47)
1300 Third Ave., Spring Lake, N. J.
Fyfe, Joseph S. (49)
1512 W. Lenox, Yakima, Wash.

# G

Gabel, Leo F. (47)
273 Philip Ave., Detroit 15, Mich.
Gabriel, Anthony A. (47)
20220 Eastwood Dr., Detroit 24, Mich.
Gadiel, Herbert (42)
5855 N. Camac, Gadiel's Pharmacy, Philadelphia 41, Pa.
Gaffney, G. G. (49)
1011 Lincoln Ave., San Jose 10, Calif.
Gagne, Joseph (49)
Western Massachusetts School of Pharmacy, 694 Chicopee St., Willimansett, Mass.
Gagne, Mildred G. R. (49)
51 Chapin St., Holyoke, Mass.
Gagne, Richard J. (49)
43 Wellesley Rd., Holyoke, Mass.
Gagnon, Francois (47)
148¾ Lafayette, Quebec, Canada.
Gaidemak, Samuel W. (47)
132 S. Orange Ave., Newark 3, N. J.
Gaillard, Jean-Pierre (49)
Richelieu, Montreux-Territet (Suisse).
Gaines, Joyce S. (46)
Georgia Baptist Hospital, Atlanta, Ga.
Gainey, Ernest T., Jr. (47)
583 King St., Charleston, S. C.
Gaither, Alva L. (45)
1043 Hub St., Sherman, Tex.
Gakenheimer, Albert C. (27)
606 Providence Rd., Towson 4, Md.
Gakenheimer, Walter C. (38)
66 Elm St., Westfield, N. J.
Gakenheimer, William F. (25)
800 Washington Blvd., Baltimore 30, Md.
Galanter, Myer (47)
2151 Lakeside Dr., Louisville 5, Ky.
Galbis, Ricardo (32)
12 #35, Miramar, Marianao, Habana, Cuba.
Galehouse, Leon (46)
929 Main St., Carrington, N. Dak.
Galgano, Don (45)
4413 Colonial Dr., Columbia, S. C.
Galimberti, Antonio (49)
Calle de Zaragoza 19, Coyoacan D. F., Mexico.
Gall, L. F. (45)
100 N. Walnut St., Danville, Ill.
Gallagher, Donald W. (44)
335 Graceland Ave., Des Plaines, Ill.
Gallagher, Rodney E. (45)
1503 Carlisle Ave., Prospect Park, Pa.
Gallahou, Murray (39)
3924—7th Ave., Brooklyn, N. Y.
Gallerani, Edward (49)
16 Oak Hill Ave., North Agawam, Mass.
Galli, Charles M. (48)
113-117 W. End Ave., Pompton Plains, N. J.
Galloway, J. Earle (45)
712 Ashworth Rd., West Des Moines, Iowa.
Galluba, Louis H. (43)
735 Congress St., Portland, Me.
Galvin, Dorothy M. (45)
St. Luke's Methodist Hosp., Cedar Rapids, Iowa.
Gambetta, Primo (48)
457 E. 174th St., Bronx 57, N. Y.
Gambill, Milburn (49)
324½ W. Reynolds St., Urbana, Ohio.
Gamble, Dorothy (47)
Greenfield, Mo.
Gamble, Francis M. (46)
Midland Ave. & 7th St., Midland, Pa.
Gamble, J. P. (44)
207 Houston St., Monroe, N. C.
Gamble, William D. (49)
121 Edwards St., Merkel, Tex.
Gamboa, Ignacio C. (48)
Patterson Drug Co., Danville, Va.
Gambrall, Morris G. (46)
5070 Ford St., Speedway, Ind.
Gammil, John E. (46)
Gammil Bros. Drug Co., 934 Oxmoor Rd., Birmingham 9, Ala.
GAMMON, IRVING P. (06)
1363 Beacon St., Brookline, Mass.
Ganbarg, Marc (48)
93 W. Tremont Ave., New York 53, N. Y.
Gannino, Michael (44)
47 Wendell St., East Saugus, Mass.
Ganong, Donald R. (47)
505 Evergreen St., West Lafayette, Ind.
Gapinski, Roman (48)
2105 W. Mitchell St., Milwaukee 4, Wis.
Garb, Dr. John (49)
219 E. 19th St., New York 3, N. Y.
Garber, Donald L. (46)
Box 312, Newcastle, Wyo.
Garbrick, Gray E. (47)
2121 Taraval St., San Francisco 16, Calif.
Garcia, Jenaro E. (49)
Box 57, Hatillo, Puerto Rico.
Garcia-Hernandez, Manuel (48)
G. No. 56, Vedado, Habana, Cuba.
Gardella, Joseph L., III (47)
2301—39th St., Sacramento, Calif.
Gardemann, Earle F. (45)
207 Templeton Blvd., Salt Lake City, Utah.
Gardill, Eugene A. (46)
418 Library St., Braddock, Pa.
Gardner, Alvin E. (44)
24 W. Oakland Ave., Columbus 1, Ohio.
Gardner, Clyde, Jr. (42)
c/o Lederle Laboratories Div., Am. Cyanamid Co., Sales Ed. Dept., Pearl River, N. Y.
Gardner, Frank R. (45)
47 Frederick Blvd., Jamestown, N. Y.
Gardner, James M. (48)
402 E. 2nd St., Fairmont, Minn.
Gardner, John H. (32)
General Research Office, The Johns Hopkins Univ., Ft. Lesley McNair, Washington 25, D. C.
Gardner, Maynard E. (45)
3 Public Sq., Hannibal, N. Y.
Gardner, Milton E. (49)
1204 Ellison Ave., Louisville 4, Ky.
Gardner, Raymond G. (48)
91 Legion Dr., Kenmore 17, N. Y.
Garelick, Dana (45)
2580 Polk St., San Francisco 9, Calif.
Garfinkel, Frank (47)
141 Avenue A, New York 3, N. Y.
Garfinkel, Marvin (47)
1613 N. 53rd St., Milwaukee 8, Wis.
Garges, John F. (37)
112 Maiden Choice Lane, Baltimore, Md.
Garlick, Joseph W. (46)
10 Ralston Ave., Havertown, Pa.
Garner, James W. (47)
Bradshaw Drug Co., Lebanon, Tenn.
Garrett, Marvin L. (48)
Chapel Hill, Tenn.
Garrett, William C. (45)
403 Clark Blvd., Murfreesboro, Tenn.
Garrido, Miguel F. (40)
Ave. De Wilson #855, Vedado, Habana, Cuba.
Garriga, Maurice (48)
112 Wakefield Ave., Yonkers 4, N. Y.
Garrison, Robert H. (48)
99 Stratford Ave., Lansdowne, Pa.
Gartenberg, Samuel (46)
664 Mt. Prospect Ave., Newark 4 N. J.
Gartland, Joseph W. (48)
203 Walnut Hill Lane, Manoa, Havertown, Pa.
Garvens, Honora (45)
2023 N. 39 St., Milwaukee 8, Wis.
Garvin, Alice-Esther (45)
20 Lake Pl., New Haven 11, Conn.
Gary, Margaret S. (44)
1307 Hampton Blvd., Norfolk, Va.
Gasaway, Mack A. (45)
2739 N. Grand Ave., St. Louis 6, Mo.
Gasbarre, Alighieri G. (45)
Y. M. C. A., Oil City, Pa.
Gasche, George E. (49)
1460 Crestwood Rd., Toledo 12, Ohio.
Gasen, Robert C. (45)
218 Huntleigh Ave., Fayetteville, N. Y.
Gaskins, Kenneth R. (46)
Box 217, Hymera, Ind.
Gass, Charles B. (28)
3717 Livingston St., Washington 15, D. C.
Gass, Jane (46)
3717 Livingston St., Washington 15, D. C.
Gasser, Alliene (45)
3400 Washington St., Wilmington, Del.
Gasser, Franklin (44)
3400 Washington St., Wilmington, Del.
Gassett, McKinley (38)
Emergency Hospital, Washington, D. C.
Gasson, J. E. (39)
118 N. Detroit St., Kenton, Ohio.
Gaston, Gail A. (30)
Belington, W. Va.
Gaston, Mary G. (48)
Sylacauga, Ala.
Gates, E. E. (45)
1724 Main St., Joplin, Mo.
GATHERCOAL, E. N. (05)
P. O. Box 72, Pentwater, Mich.
Gattone, Vincent H. (40)
5301 Roosevelt Way, Seattle 5, Wash.
Gaudy, William T. (48)
1358 Jonquil St., N. W., Washington 12, D. C.
Gaul, Hermina (44)
449 Banfil St., St. Paul 2, Minn.
Gaunt, Hunter (47)
3 Valley St., Winchester, Va.
Gavarre, Juan S. (45)
Laba. Senosiain, Bahia de Caracus, N. O. 16, Mexico D. F., Mexico.
Gaver, Paul C. (48)
100 W. University, Pkwy., Baltimore 10, Md.
Gavey, Frank R. (47)
22691 Michigan, Dearborn, Mich.
Gaw, Robert W. (31)
506 Penn Ave., McKennan Drug Co., Pittsburgh, Pa.
Gawienowski, Anthony M. (48)
3830 Sherbrooke Rd., Toledo, Ohio.
Gay, William J. (46)
1016 E. Kalamazoo St., Lansing 12, Mich.
Gaydos, Joseph N. (47)
180 Vaughn, Johnstown, Pa.
Gayer, Robert N. (47)
c/o Gayer's Pharmacy, Madrid, Iowa.
Gaylen, Morris G. (48)
14529 Archwood, Van Nuys, Calif.
Gayman, Dorothy J. (46)
R. D. 2, Marianna, Pa.
Gaynor, Jess M. (47)
190 State St., Perth Amboy, N. J.
Gaynor, Ted (46)
180 Smith St., Perth Amboy, N. J.
Gayok, Michael F. (47)
624 Archer Ave., McKeesport, Pa.
Gdalman, Louis (43)
1114 E. 52nd St., Apt. 3, Chicago, Ill.
Gearien, James E. (46)
Univ. of Ill., Coll. of Pharmacy, 808 S. Wood St., Chicago 12, Ill.
Geary, Albert A. (48)
960 S. Oxford, Los Angeles 6, Calif.
Gechter, Frank W. (47)
1370 Blount St., Rocky River 16, Ohio.
Gecker, Aaron (48)
972 West Side Ave., Jersey City 6, N. J.
Gegenheimer, Albert P. (29)
3096 Mayfield Rd., Cleveland Heights, Ohio.
Gehrs, Kathryn D. (47)
Milwaukee Children's Hosp. Pharmacy, 721 N. 17th St., Milwaukee 3, Wis.
Gehrs, Warren G. (46)
3284 N. Green Bay Ave., Milwaukee 12, Wis.
Geiger, E. Burns (46)
216 Granville Dr., Silver Spring, Md.
Geiger, Ernest (39)
3842 Monteith Dr., Los Angeles 43 Calif.
Geiger, Robert L. (45)
112 Sloat Blvd., San Francisco 16, Calif.
Geiler, F. L. (37)
360 Waitman St., Morgantown, W. Va.
Geisler, Arthur W. (46)
1632 E. Irving Pl., Milwaukee 2, Wis.
Geisler, Imogene R. (49)
3034 S. E. Lincoln, Portland 15, Oreg.

Geisler, Joseph F. (89)
255–25 Kensington Pl., Great Neck, N. Y.
Gelber, Marvin (49)
4039 Roosevelt Blvd., Philadelphia 24, Pa.
Gelberg, Eddy (48)
520 Bates, Detroit 26, Mich.
Geldreich, Walter (47)
5124 N. Kent Ave., Milwaukee 11, Wis.
Geller, Louis (48)
45 Wayne St., Jersey City 2, N. J.
Geller, Max (44)
211 Corona Ave., Long Beach 3, Calif.
Gellin, Irwin H. (46)
1502 Mott Ave., Far Rockaway, N. Y.
Gelwarg, Daniel (49)
163 Elm St., Orange, N. J.
Gemignani, Geno H. (45)
6129 Park Ave., West New York, N. J.
Genaro, Marcos R. (47)
2058 E. Ave., Be. Obrere, Santurce, Puerto Rico.
Genochio, Edward P. (45)
1940 Broadway, San Francisco 9, Calif.
Genovese, Cosmo D. (46)
7 Norwood Ave., Plainfield, N. J.
Gent, Earl V. (46)
300 N. Hesperia, Collinsville, Ill.
Gentile, Anthony A. (47)
3636 Forest St., Homestead Park, Pa.
Gentry, James H. (49)
602 W. Main Ave., Knoxville, Tenn.
Gentz, Beth (47)
Box 313, Youngsville, Pa.
Gentz, Robert C. (46)
1304 Marion St., Dunmore, Pa.
George, Harold V. (46)
229 Market St., Johnstown, Pa.
George, Harry N. (48)
1310 E. 52nd St., Seattle 5, Wash.
George, Homer A. (46)
706 Broadway, Cape Girardeau, Mo.
George, Otho G. (48)
829 Knott St., Bakersfield, Calif.
George, Victor A. (46)
400 Midland Ave., Midland, Pa.
Georgia, Edward H. (49)
141 Park Ave., Newark, N. J.
Gerache, Joseph J. (49)
Peoples Drug Store, Vicksburg, Miss.
GERALD, HERBERT F. (06)
2871 Newport Ave., Omaha, Nebr.
Gerbinsky, Walter F. (46)
1126 S. 15th St., Manitowoc, Wis.
Gerboth, Henry L. (47)
5208 W. Bluemound Rd., Milwaukee 13, Wis.
GERDING, HERBERT H. (36)
3414 Fairfield Ave., Ft. Wayne, Ind.
Gerena-Ackerman, Hector (47)
Del Carmen St. 1194, Stop 17, Santurce, Puerto Rico.
Gerhardt, Francis S. (47)
3189a Nebraska Ave., St. Louis 18, Mo.
Gerken, F. M. (39)
319 E. 204th St., New York 67, N. Y.
Gerlach, G. H. (36)
Vick Chemical Co., 122 E. 42nd St., New York, N. Y.
Germ, John R. (48)
817 E. C St., Pueblo, Colo.
Germain, Donald, (49)
8311 S. W. 45th, Portland 19, Oreg.
Germone, Roy L. (48)
2147—45th Ave., San Francisco, Calif.
Gerrard, Louie G. (42)
Marks, Miss.
Gersenfish, Saul (48)
876 Cleveland, Cincinnati 29, Ohio.
GERSHENFELD, LOUIS (16)
281 S. 63d St., Philadelphia, Pa.
Gershenson, Isaac (46)
1774 Eastburn Ave., Bronx, New York 57, N. Y.
GERSHON, S. D. (31)
6710 S. Chappel Ave., Chicago 49, Ill.
Gerson, Alex D. (47)
3448 N. Capitol Ave., Indianapolis, Ind.
Gerson, Bernard (43)
199 Sheridan Ave., Roselle, N. J.

Gerstenzang, Edward M. (37)
Box 83, Grand Gorge, N. Y.
Gerstner, Robert R. (46)
802 Lexington Ave., New York 21, N. Y.
Gervasi, Pasquale (48)
489—15th Ave., Newark 3, N. J.
Gesche, Robert A. (48)
426 W. Slosson Ave., Reed City, Mich.
Geseneiser, Edna E. (43)
86 Lounsbury Ave., Waterbury, Conn.
Geske, Edward H. (47)
1505 Tower Ave., Superior, Wis.
Gesoalde, Nicholas S. (38)
233 Schenck Ave., Great Neck, N. Y.
Gestrich, Anne (45)
7819 St. Charles Rd., St. Louis 14, Mo.
Getz, Howard A. (49)
613 Kenilworth Dr., Pittsburgh 16, Pa.
Geue, Fred A. (33)
240 N. E. 60th St., Apt. 26, Portland 15, Oreg.
Gever, Erwin (48)
6036 Augusta St., Philadelphia 24, Pa.
Gever, Theodore (48)
526 W. Duncannon Ave., Philadelphia, Pa.
Gezer, George (49)
809 Lincoln Ave., Charleroi, Pa.
Gholston, Joe B. (45)
Millen, Ga.
Giaimo, Thomas C. (48)
240 Garden St., Hoboken, N. J.
Giallanella, James L. (47)
65 Glenridge Ave., Montclair, N. J.
Giamatteo, Jean L. (46)
1098 Melrose Ave., Ambridge, Pa.
Gianantoni, Elmo J. (47)
76 Prospect St., Stafford Springs, Conn.
Gianas, Elaine (47)
6144 N. Richmond Ave., Chicago, Ill.
Gianno, Vincent A. (49)
2854 E. 197th St., New York 61, N. Y.
Giannotto, Benedetta (47)
164 Orange St., Bloomfield 2, N. J.
Giardina, Antoinette (49)
1609 Bergenline Ave., Union City, N. J.
Gibbs, Donald M. (49)
405 N. 14th St., Albuquerque, N. Mex.
Gibbs, E. W. (39)
2501—7th Ave., S., Birmingham 5, Ala.
Gibbs, R. W. (48)
1654 N. W. 35th St., Miami, Fla.
Gibby, Noel J. (43)
119 Cheyenne Blvd., Colorado Springs, Colo.
Gibney, E. Paul (45)
445 Lake Shore Dr., Chicago 11, Ill.
Gibson, Ernest L., Jr. (43)
3065 Grandview, Oroville, Calif.
Gibson, Whitmel H. (43)
Box 113, Jourdanton, Tex.
Gibson, William W., Jr. (48)
305 Livingston Ter., S. E., Apt. C, Washington 20, D. C.
Gibson, Z. M. (46)
14316 Potomac Ave., East Cleveland 12, Ohio.
GIDLEY, WILLIAM FRANCIS (07)
University of Texas, Austin, Tex.
Gier, Herman J. (49)
Phoenix, Oreg.
Gifford, Floyd C. (45)
118 Lincoln Blvd., Kenmore, N. J.
Gift, Wendell J. (42)
Converse, Ind.
Gilbert, Ernest T. (48)
Route 3, Box 28, Merced, Calif.
Gilbert, Jack B. (46)
112 Hutchings St., Roxbury 21, Mass.
Gilbert, Martin I. (46)
278 First Ave., New York 9, N. Y.
Gilbert, R. L. (44)
Gilbert Drug Store, Lawton, Okla.
Gilbert, Roy A. (47)
Adam St., Tennille, Ga.
Gilchrist, Leonard L. (47)
Crossville, Ala.
Gilden, Charles (45)
536 Broadway, Buffalo, N. Y.

Gilibertys, Angeles U. (45)
Box 1012, San Juan 5, Puerto Rico.
Gill, Gregory L. (47)
Kenvil Ave., Succasunna, N. J.
Gill, Richard C. (45)
P. O. Box 281, Palo Alto, Calif.
GILLESPIE, FRANK T. (26)
220 State St., St. Joseph, Mich.
Gillespie, Robert J. (48)
2230 Mount Curve, St. Joseph, Mich.
Gillespie, Robert L. (48)
Sardis, Miss.
Gilliam, A. Lee (46)
802 Florida St., Baton Rouge, La.
Gilliam, Wade A. (46)
454 W. End Blvd., Winston Salem, N. C.
Gillig, Arthur W. (46)
1115 Prospect, Toledo 6, Ohio.
Gillis, Ewen (49)
1208 S. 2nd, Louisville, Ky.
Gillman, Geo. W. (49)
400 N., Fort Dodge, Iowa.
Gillman, Harold (49)
4740 N. Troy, Chicago 25, Ill.
Gillmore, Kenneth R. (48)
1603 Central, Apt. 214, Indianapolis 2, Ind.
Gilman, Ray E. (49)
3225 N. E. 29th, Portland, Oreg.
Gilmore, Robert R. (46)
1103 Buckingham Rd., Palisade, N. J.
Gilreath, George M. (48)
275 Guerrero, Apt. 377, San Francisco, Calif.
Gilson, Charles F. (24)
2030 Smith St., Centredale, R. I.
Gingold, Aaron (48)
517 Shepherd Ave., Brooklyn 8, N. Y.
Ginkiewicz, Mary C. (48)
4425 Aubrey Ave., Philadelphia 14, Pa.
Ginsberg, Julius (44)
2375 W. 48th St., Los Angeles 43, Calif.
Ginsburg, David N. (47)
749 N. Stone Ave., Tucson, Ariz.
Ginsburg, Henry (46)
123 E. North St., New Castle, Pa.
Ginsburg, Samuel I. (46)
19 S. Washington Ave., Bergenfield, N. J.
Giordano, Charles V. (44)
2200 Ursuline Ave., New Orleans 19, La.
Gissel, Elmer, A. (47)
Veterans Hospital, Fort Howard 19, Md.
Gisvold, Ole (38)
College of Pharmacy, Univ. of Minn., Minneapolis, Minn.
Gitomer, Dave (41)
100 Annapolis Blvd., N. E., Glen Burnie 9, Md.
Gittinger, Georgianna S. (40)
32 S. Greene St., Baltimore 1, Md.
Givens, Horace T. F. (28)
98 Glenwood Ave., East Orange, N. J.
Gladwell, Richard M. (47)
1102—20th St., Huntington 1, W. Va.
Glantz, Milton (49)
48-36—44th St., Woodside, L. I., N. Y.
Glanville, George (43)
58 Rio Vista Ave., Oakland 11, Calif.
Glanville, Reg. R. (47)
2114 Eastlawn, Detroit 15, Mich.
Glasco, George D. (46)
1534 Clark St., Goodland, Kans.
Glaser, Ed. E. (49)
648 S. 41st St., Louisville 11, Ky.
Glaser, Morris (45)
3949 Laclede Ave., St. Louis 8, Mo.
Glasgow, Ralph (46)
200 S. Spring, Tupelo, Miss.
Glash, Norbert L. (47)
700 Knoxville, Peoria, Ill.
Glass, James A. (49)
2265 Hazel Ave., Beaumont, Tex.
Glassbrenner, Irwin (47)
3053 Brighton Rd., Pittsburgh 12, Pa.
Glasser, Arthur C. (47)
71 Pasadena St., Pittsburgh 11, Pa.
Glasser, Edward Francis (43)
959 N. Leavitt St., Chicago 22, Ill.

Glauser, Meyer S. (45)
947 N. 5th St., Philadelphia 23, Pa.
Glazer, Jack H. (47)
1606 Hussion St., Houston, Tex.
Gleason, David, J. (31)
U. S. Marine Hospital, Beach 149th (Neponsit), Rockaway Beach, L. I., N. Y.
Gleason, Edna E. (48)
37 S. Sutter St., Stockton 1, Calif.
Gleason, Eugene H. (49)
4111 Bridgetown Rd., Cheviot 11, Ohio.
Glenn, George F. (49)
P. O. Box 512, Atlantic City, N. J.
Glennon, Catherine (36)
55 E. Superior St., Chicago 11, Illinois.
Glesener, Jack Jay (46)
241 E. Dexter, Covina, Calif.
Glick, David P. (47)
2429 Birch St., Alhambra, Calif.
Glick, Emanuel (46)
1814 W. Sulis St., Philadelphia 41, Pa.
Gliddon, Leroy B. (46)
Kirkland, Ill.
Glocker, R. F. (48)
649—4th Ave., San Francisco 18, Calif.
GLOVER, WILLIAM H. (91)
299 Essex St., Lawrence, Mass.
Gluck, Morton (43)
1368 Sheridan Ave., New York 56, N. Y.
Glucksman, Helen (35)
590 Ocean Ave., Brooklyn 26, N. Y.
Glushakow, Jacob (49)
2217 Annapolis Rd., Baltimore 30, Md.
Gluskin, Philip (46)
891 Southern Blvd., Bronx 59, N. Y.
Godager, Charles J. (47)
5574 Pershing Ave., St. Louis 12, Mo.
Goddard, Charles H. (48)
304 S. Second St., Brighton, Colo.
Godley, Leo F. (44)
36 Crestwood Ave., Tuckahoe 7, N. Y.
Godshall, Alyce (46)
Box 292, Fox Lake, Ill.
Godshall, Henry S. (34)
314 Congress Ave., Lansdowne, Pa.
Godwin, Eric C. (47)
560 De Courcelles St., Montreal, P. Q., Canada.
Goeckel, Henry J. (18)
191 N. Lehigh Ave., Cranford, N. J.
Goetz, Arturo B. (41)
Angel Peluffo 3993, Buenos Aires, Argentina, S. A.
Goetz, Leo D. (44)
2310 San Rae Dr., Dayton, Ohio.
Goetz, Victor J. (46)
319 Summitt St., McKeesport, Pa.
Goff, Frank H. (49)
11 Pacific Ave., W., Forest Grove, Oreg.
Gofine, Sylvia (45)
40 Capra Way, Apt. 9, San Francisco 16, Calif.
Goggin, Ronald J. (46)
Adams, Wis.
Goguen, Neri A. (45)
319 Pleasant St., Gardner, Mass.
Gohdes, Harold C. (47)
Edgar, Wis.
Goings, William C. (48)
3029 Gilbert Ave., Cincinnati 6, Ohio.
Goisman, Max M. (47)
2127 E. Capitol Dr., Milwaukee 11, Wis.
Gold, Aaron (45)
166 Rochrer, Buffalo 8, N. Y.
Gold, Edna R. (48)
2028 S. 5th St., Philadelphia 48, Pa.
Gold, Emanuel (49)
145 Broadway, Long Branch, N. J.
Gold, Emily B. (43)
3101 Lawnview, Corpus Christi, Tex.
Gold, Irving (46)
362 E. Long St., Columbus, Ohio.
Gold, Jacob D. (44)
1550 E. 17th St., Brooklyn 30, N. Y.
Gold, Joseph (47)
581 Kearny Ave., Arlington, N. J.
Gold, Lawrence (48)
209 E. 165th St., Bronx 56, N. Y.
Gold, Max (46)
Box 921, New Rochelle, N. Y.
Goldberg, Alvin (41)
c/o Alvin's Pharmacy, 162 Cedar Lane, Teaneck, N. J.
Goldberg, Alvin (45)
229 Stockton St., Brooklyn 6, N. Y.
Goldberg, David H. (44)
889 Carew St., Springfield, Mass.
Goldberg, Gerald (49)
142 West St., New Britain, Conn.
Goldberg, Harry J. (41)
2707 Pennsylvania Ave., Baltimore, Md.
Goldberg, Isabelle B. (42)
200 Clinton St., Brooklyn 2, N. Y.
Goldberg, J. J. (43)
130-08 Liberty Ave., Richmond Hill, N. Y.
Goldberg, Leon I. (47)
247 Coming St., Charleston 24, S. C.
Goldberg, Marvin J. (48)
616 N. Trumbull, Chicago, Ill.
Goldberg, Max (43)
1270 E. 18th St., Brooklyn, N. Y.
Golden, George P. (47)
214½ Park Ave., Mechanicsville, N. Y.
Golden, Richard L. (48)
77-35—171st St., Jamaica Estates North, Queens, N. Y.
Golden, Thomas J. (46)
179 Boulevard, Glen Rock, N. J.
Goldfarb, Leo (46)
6846—78th St., Middle Village, N. Y.
Goldfarb, Louis (44)
1235 Grant, Denver, Colo.
Goldfield, Rose (49)
447—2nd St., Braddock, Pa.
Goldie, June T. (41)
320 Rosemont Blvd., San Gabriel, Calif.
Goldin, Joel W. (47)
Howard St., Rockmart, Ga.
Goldman, Edwin F. (43)
145 Rafael Dr., San Rafael, Calif.
Goldman, Goldie (39)
650 E. 6th St., New York 9, N. Y.
Goldman, Harry A. (46)
2547 S. 7th St., Philadelphia, Pa.
Goldman, Myer (49)
49 Main St., Peterborough, N. H.
Goldman, Samuel A. (45)
870 Market St., San Francisco, Calif.
Goldner, Karl J. (31)
School of Pharmacy, Univ. of Tennessee, Memphis, Tenn.
Goldner, Lewis R. (49)
101 Green St., Syracuse, N. Y.
Goldsmith, Howard (47)
5018 N. Ridgeway, Chicago, Ill.
Goldstein, Dave (45)
North Highland Drug Co., Birmingham, Ala.
Goldstein, Harold S. (49)
1751 Lee Pl., Detroit 6, Mich.
Goldstein, Hyman (49)
431 Orange St., S. E., Washington 20, D. C.
Goldstein, Jacob (45)
345 Bedford Ave., Brooklyn 11, N. Y.
Goldstein, Louis I. (48)
80 Milford Ave., Newark 8, N. J.
Goldstein, Martin (46)
281 E. 33rd St., Paterson 4, N. J.
Goldstein, Marvin (49)
2126 Village Dr., Apt. 2, Louisville, Ky.
Goldstein, Meyer L. (49)
16703 Hamilton, Highland Park 3, Mich.
Goldstein, Morris G. (28)
2704 Woodley Pl., N. W., Washington, D. C.
Goldstein, Samuel W. (32)
2411 N. Charles St., Baltimore 18, Md.
Goldstone, Nathan H. (41)
6001 Excelsior Blvd., St. Louis Park, Minn.
Goldwag, Harry L. (45)
152 W. 42nd St., New York 18, N. Y.
Goldwag, Joseph S. (36)
600 Lafayette Ave., Brooklyn, N. Y.
Gombar, Gusti A. (49)
1631 Ridgewood Ave., Lakewood 7, Ohio.
Gomez-Camejo, Evelio (48)
Jovellar 253, Habana, Cuba.
Gondringer, Eugene V. (48)
2554 Harney St., Omaha, Nebr.
Gong, Yin Mina (45)
546 Grant Ave., San Francisco, Calif.
Gonya, Fred H. (44)
Main & Cottage St., Bar Harbor, Me.
Gonyea, H. A. (44)
20 Wells St., Plattsburg, N. Y.
Gonyer, Louis X. (49)
150 Bridge, Manchester, N. H.
Gonz, Michael, Jr. (49)
357—9th St., Brooklyn 15, N. Y.
Gonzalez, Carlos G. (29)
Box 350, Plaza Degetau y Calle Cristina, Ponce, Puerto Rico.
Gonzalez, Edwin (49)
74 Pinero St., Rio Piedras, Puerto Rico.
Gonzalez, J. A. (49)
Station Hospital, Hamilton, Calif.
Gonzalez-Flores, Enrique A. (41)
Plaza Degetau y Calle Cristina, Ponce, Puerto Rico.
Gooch, John M. (46)
Box 219, V A Branch P. O., Los Angeles 25, Calif.
Good, Galen T. (47)
308 Franklin, Clarksville, Tenn.
GOOD, J. EDISON (16)
4th & Bridge St., New Cumberland, Pa.
Goodale, Chester H. (49)
3629 S. E. Division St., Portland 2, Oreg.
Goode, Agnes M. (45)
602 Beacon St., Boston 15, Mass.
Goode, John A. (20)
Box 1094, Asheville, N. C.
Goodfriend, Melvin (48)
8414 Fayette St., Philadelphia 49, Pa.
Goodison, Alfred M., III (49)
6827 McPherson Blvd., Pittsburgh 8, Pa.
Goodman, E. Edwin (47)
504 N. Claybrook, Memphis, Tenn.
Goodman, George N. (47)
125 W. Main St., Mesa, Ariz.
Goodman, H. G., Jr. (47)
4614 Fifth Ave., Pittsburgh 13, Pa.
Goodman, Joseph (16)
R. D. 2, Stamford, Conn.
Goodman, Ralph (47)
1685 Topping Ave., Bronx 57, N. Y.
Goodman, Samuel M. (46)
49-53 Edison Pl., Newark 2, N. J.
Goodman, Stanley (48)
6237 Old York Rd., Philadelphia 41, Pa.
Goodmaster, Edmund E. (48)
Rm. 418, State Capitol, Hartford, Conn.
Goodness, Joseph H. (25)
179 Longwood Ave., Boston, Mass.
Goodnight, M. Maurice (47)
716 N. 9th St., Lafayette, Ind.
Goodrich, Arleigh H. (45)
1918 America St., Baton Rouge, La.
GOODRICH, FOREST J. (23)
Bagley Hall, Univ. of Washington, Seattle, Wash.
Goodrich, Ralph A. (25)
121 Clinton St., North East, Pa.
Goodrum, Mrs. Frank A. (43)
2000 S. Taylor, Little Rock, Ark.
Goodsell, Charles E. (47)
5 N. Main St., Windsor Locks, Conn.
Goodwin, Donald A. (48)
R. D. 5, Towanda, Pa.
Goodwin, Jewell (48)
1616 W. Alabama, Apt. 4, Houston, Tex.
Goodyear, John M. (35)
5755 Broadway Ter., Indianapolis 20, Ind.
Goodyear, Wilbur B. (15)
1901 Derry St., Harrisburg, Pa.
Goodykoontz, H. A. (36)
1813 Dearborn St., Bluefield, W. Va.
Gooley, Norman H. (48)
42 Euclid Ave., Willoughby, Ohio.
Goolkasian, George A. (48)
42 Whitfield Rd., West Somerville, Mass.
Goolsbee, J. R. (45)
Chester, Tex.
Goorley, John T. (31)
c/o Johnson & Johnson, 471 Darwin, Buenos Aires, Argentina, S. A.
Goranin, Franz H. (44)
5746 Kenmore, Chicago 40, Ill.

Gorbis, Morris (46)
1147 Boulevard, Bayonne, N. J.
Gordon, Bernice C. (49)
Gordon Drug Store, 901 Ryan St., Lake Charles, La.
Gordon, Bonnie W. (47)
1441 Peabody, Memphis, Tenn.
Gordon, Edward L. (47)
2001 Center Ave., Pittsburgh 19, Pa.
Gordon, Elliot (46)
74 Mills St., Malden 48, Mass.
Gordon, George E. (47)
Park City, Utah.
Gordon, Joseph (48)
900 Sutter, San Francisco 9, Calif.
Gordon, Kusiel D. (48)
45 Main, Sussex, N. J.
Gordon, Melvin G. (48)
35 Deer Park Rd., Great Neck, N. Y.
Gordon, Samuel M. (39)
Endo Products Inc., 84-40—101st St., Richmond Hill 18, N. Y.
Gordon, Wayne W. (45)
1075 Columbia, Salem, Oreg.
Gordon, William E., Jr. (49)
4601 Chester Ave., Apt. 2B, Philadelphia 43, Pa.
Gorenflo, Oscar W. (45)
253 W. Drayton, Ferndale, Mich.
Gorfain, Perry M. (49)
9 W. Pearl St., New Britain, Conn.
Gorin, Lawrence L. (45)
800 Greenwood Ave., Brooklyn 18, N. Y.
Goriup, Othmar F. (47)
Dept. of the Army, Office of the Surgeon General, Main Navy Bldg., Washington 25, D. C.
Gornikiewicz, Sylvester L. (47)
2329 William St., Buffalo 6, N. Y.
Gorrilla, John J., Jr. (46)
210 Suffolk St., Ironwood, Mich.
Gorset, Albert (46)
39 S. Main St., Freeport, N. Y.
Gosman, George M. (47)
Dillon, Mont.
Goss, George E. (43)
5938 N. Greeley, Portland, Oreg.
Gosselin, Ida M. (49)
302 Salmon St., Manchester, N. H.
Gosselin, Raymond A. (49)
269 Harvard St., Cambridge 36, Mass.
Gotschall, Leo G. (49)
5510 Saida, Kansas City, Mo.
Gottesman, Louis (48)
10559 Blythe Ave., Los Angeles, Calif.
Gottfried, Oscar (41)
1440 Broadway, New York, N. Y.
Gottfried, Samuel (45)
405 Forum Bldg., 9th & K Sts., Sacramento 14, Calif.
Gotthelf, B. Irma (48)
Dept. of Pharmacy, 525 E. 68th St., New York 21, N. Y.
Gottlieb, Eugene A. (46)
216 N. York Rd., Willow Grove, Pa.
Gottlieb, George (48)
90-11—149th St., Jamaica 2, N. Y.
Goudy, Earl E. (47)
142 E. Main, Beach City 2, Ohio.
Gould, Raymond M. (44)
826 W. 50th St., Minneapolis 9, Minn.
Gould, Samuel H. (42)
525 W. 43rd St., New York, N. Y.
Gould, William M. (45)
813 Kingston Rd., Baltimore 12, Md.
Goulden, H. DeWitt (36)
The Toilet Goods Association, Inc., Room 1427, 9 Rockefeller Plaza, New York 20, N. Y.
Goulet, Edgar E. (40)
443 Lake Ave., Manchester, N. H.
Gound, Wayne (42)
c/o Westerman Drug, Big Spring, Tex.
Gouwens, Doris H. (43)
7827 S. Shore Dr., Chicago 49, Ill.
Gowan, George A. (45)
Greenville General Hospital, Greenville, S. C.
Gowan, Robert L. (48)
1211 W. 2nd, Sulphur, Okla.
Goyan, Frank M. (43)
625 Ashbury St., San Francisco 17, Calif.
Goyette, Gordon, F., Jr. (49)
15047 Mark Twain, Detroit 27, Mich.

Grabelle, Moe J. (48)
117 Washington St., Newark, N. J.
Grabowski, Walter (45)
3434 Geary, Apt. 6, San Francisco 18, Calif.
Grace, William D., Jr. (46)
6222 Spain St., New Orleans, La.
Grady, William D. (47)
344 Main St., Johnstown, Pa.
Grady, William F. (45)
Colon Hospital, Box MM, Cristobal, Canal Zone.
Grady, William Francis (45)
104 School St., Clinton, Mass.
Graef, John G. (48)
478 Westside Ave., Jersey City, N. J.
Graetz, A. Corinne Hines (44)
432 Highland Blvd., Bremen, Ohio.
Graetz, Theodore G. (46)
400 W. Mansfield St., Bucyrus, Ohio.
Graham, Donald W. (47)
Lee's Pharmacy, Menomenie, Wis.
Graham, E. A. (45)
Cor. Main & A St., Vale, Oreg.
Graham, George D. (49)
583 Bryant Court, Orangeburg, S. C.
Graham, Gordon (49)
Mt. Vernon, Ky.
Graham, Orville (46)
330 Walnut St., Mount Shasta, Calif.
Graham, Richard L. (45)
2714 Edwards St., Butte, Mont.
Graham, Thomas E. (48)
1102—3rd Ave., Longmont, Colo.
GRAHAM, WILLARD (02)
Box 4362, Chestnut Hill, Philadelphia, Pa.
Grainger, James Christopher (39)
Chattanooga Medicine Co., Chattanooga, Tenn.
Grainger, Richard J. (49)
402 N. 5th, Paducah, Ky.
Gramling, Lea G. (33)
Dunnellon, Fla.
Granados, Ralph, Jr. (49)
8950 N. 7th St., Phoenix, Ariz.
Granberg, Charles B. (47)
1819 W. Polk St., Chicago 12, Ill.
Granberry, Wm. Raymond (45)
S. S. S. Co., Atlanta 2, Ga.
Grande, Michael J. (46)
95-25 97th St., Ozone Park, L. I., N. Y.
Grande, Peter F. (45)
1350 N. Alvarado, Los Angeles 26, Calif.
Granger, Frank O. (49)
309 Sayer St., Montgomery, Ala.
Granito, A. R. (34)
30 Martin Ter., Hackensack, N. J.
Grant, Alexander (48)
7758 S. Halsted, Chicago 20, Ill.
Grant, Ernest W. (48)
Mattakessett St., Bryantsville, Mass.
Grant, George M. (46)
165 Baltic St., Brooklyn 2, N. Y.
Grant, Gordon A. (48)
Ayerst, McKenna & Harrison Ltd., P. O. Box 6115, Montreal, P. Q., Canada.
Grant, Herbert (46)
101 Chrystie St., New York 2, N. Y.
Grant, Mary J. (46)
1112 Brummel St., Evanston, Ill.
Grant, Raymond H. (46)
58 S. Main, Brigham, Utah.
Grantham, Reid B. (43)
Red Springs, N. C.
GRASSER, JOHN J. (19)
1234 St. Andrews St., New Orleans, La.
Grau, Gloria (48)
516 W. Jefferson, Kirsville, Mo.
Graves, Robert G. (49)
2786 E. Orange Grove Ave., Pasadena 8, Calif.
Gravley, Thornley B. (47)
Anderson City Hospital, 609 N. Fant, Anderson, S. C.
Gray, Eugene C. (49)
1455 W. Division, Chicago 22, Ill.
Gray, Murray C. (46)
1539 Baymiller St., Cincinnati 14, Ohio.
Greco, Dante P. (49)
1 Worcester St., Natick, Mass.
Greco, James L. (47)
4300—8th St., N. W., Canton, Ohio

Greco, Salvatore J. (42)
George Washington Univ., School of Pharmacy, Washington 6, D. C.
Green, Alice L. (48)
Beyer Hospital, Ypsilanti, Mich.
GREEN, BENJAMIN (88)
1 Market Sq., Portsmouth, N. H.
Green, Karl (48)
762 Valencia St., San Francisco 10, Calif.
Green, Leo (46)
P. O. Box 861, Atlantic City, N. J.
Green, Leo C. (47)
6120 Sherry Ave., St. Louis, Mo.
Green, Lester L. (49)
747 Maple St., Meadville, Pa.
GREEN, MELVIN W. (30)
School of Pharmacy, Univ. of Wisconsin, Madison 6, Wis.
Green, Nathaniel McEachren (43)
333 Baynes St., Buffalo, N. Y.
Green, William I. (48)
4709 Skillman Ave., Sunnyside, L. I., N. Y.
Greenaway, John H. (40)
P. O. Box 836, Portsmouth, N. H.
Greenberg, David (46)
2326 Hemphill St., Fort Worth 4, Tex.
Greenberg, Harry (49)
5451 Belair Rd., Baltimore 6, Md.
Greenberg, Jack J. (49)
7457 McClure Ave., Pittsburgh 18 Pa.
Greenberg, Joseph (39)
216 Columbus Ave., New York, N. Y.
Greenberg, Nathan (45)
503 S. Saginaw, Flint 3, Mich.
Greenberg, Pauline (48)
5000 Prytania, New Orleans 15, La.
Greenblatt, Jacob (45)
2933 Turner St., Philadelphia 21 Pa.
Greene, Charles, Jr. (46)
1521 W. Scott Pl., Independence, Mo.
Greene, Clara R. (46)
University Hospital, Augusta, Ga.
Greene, Frankie F. (47)
173 S. Grant, Denver 9, Colo.
Greene, J. F. (39)
1123 Pear St., Vineland, N. J.
Greenfield, Lewis J. (46)
1124 W. 10th Ave., Denver 4, Colo.
Greenlees, Albert (36)
Methodist Hospital, Houston, Tex.
Greenless, Robert C. (49)
1016 State, Cheboygan, Mich.
Greenspan, Sidney, (42)
1260 Main St., Bridgeport, Conn.
Greensport, Charles (45)
28 Prospect Ave., Pompton Plains, N. J.
Greenstein, Joseph (47)
2500 Penn Ave., N. W., Washington, D. C.
Greenwald, Jack (46)
40 W. Main St., Somerville, N. J.
Greenwald, Samuel (49)
99 Brainerd Rd., Allston 34, Mass.
Greenwell, Owen C. (46)
2223 Adams Ave., Huntington 4, W. Va.
Greenwood, Benjamin B. H. (47)
Broadway, Denville, N. J.
Grega, Charles A. (47)
2999 W. 25th St., Cleveland 13 Ohio.
Greger, C. E. (49)
Masonic Temple, Marshalltown, Iowa.
Gregg, David H. (48)
5337 Oaklawn Ave., S., Minneapolis 10, Minn.
GREGG, HENRY H. (33)
4954 France Ave., Minneapolis, Minn.
Gregg, Mary F. (45)
431 Riverdale, Iowa City, Iowa.
Gregorek, Frank J. (49)
2006 E. Lombard St., Baltimore 31, Md.
Gregory, G. Joseph (47)
68 Old Court House Rd., Franklin Square, N. Y.
Gregory, Monford M., Jr. (46)
1040 Wilson Rd., Norfolk 6, Va.
Gregory, Wallace K. (47)
250 S. Brentwood Pl., Clayton 5, Mo.
Gregwire, Marvin G. (43)
714 Main St., Russell, Kans.

Grein, Francis C. (48)
4629 Farmdale Ave., North Hollywood, Calif.
Greisdorf, Morris L. (45)
2002 Delaware Ave., Buffalo 16, N. Y.
Grenald, Ben (49)
555—41st St., Miami Beach 40, Fla.
Grevious, Norman H. (48)
1040 Liberty, Cincinnati 14, Ohio.
Grice, Herbert (49)
428 Cleveland St., Clearwater, Fla.
Grider, George W. (48)
215 N. Third St., Danville, Ky.
Grieb, Robert C. (46)
184 Post Rd., Darien, Conn.
Grieco, Joseph (49)
144 Ave. T, Brooklyn 23, N. Y.
Griesing, Sterling M. (46)
1138 N. 20th St., Allentown, Pa.
Griffenhagen, George B. (46)
1416 W. 48th St., Los Angeles 37, Calif.
Griffin, Charles F., Jr. (48)
Mapleton, Iowa.
Griffin, Edwin A. (46)
P. O. Box 60, Plant City, Fla.
Griffin, Ellerbe W. Jr. (49)
510 W. Mountain St., Kings Mt., N. C.
Griffin, Jess (49)
322 E. Hennepin, Minneapolis 14, Minn.
Griffin, Octavus (44)
P. O. Box 230, Roanoke Rapids, N. C.
Griffin, Paul R. (47)
301 W. 5th St., Fort Scott, Kans.
Griffin, Raymond P. (48)
438 Bird Ave., Buffalo, N. Y.
Griffin, Walter D., Jr. (48)
4118 Hershel, Jacksonville 5, Fla.
Griffith, Bates L. (46)
4017 Baltimore, Westport Sta., Kansas City, Mo.
GRIFFITH, IVOR (16)
Glanom Rydar Rd., Jenkintown, Pa.
Griffith, Jean E. (46)
313 W. 4th St., Williston, N. Dak.
Griffith, Kenneth H. (46)
949 Washington Ave., Racine, Wis.
Griffith, Walter L. (39)
Parke, Davis and Co., Detroit 32, Mich.
Griffith, William E. (49)
2303 W. Berry St., Fort Worth 4, Tex.
Griffith, William M. (42)
450 Pendegast St., Woodland, Calif.
Griffiths, Evan J. (47)
2543 University Ave., San Diego 4, Calif.
Griffiths, Robert W. (49)
2220 Nill Ave., Dayton 10, Ohio.
Griger, Albert Bill (47)
2668 E. 128th St., Cleveland 20, Ohio.
Griggs, George T. (37)
Griggs Drug Store, Lake Orion, Mich.
Grignard, Emile E. (46)
215—4th Ave., New York, N. Y.
Grill, Frederick (27)
6805 N. E. Rodney Ave., Portland, Oreg.
Grimaldi, Blasey V. (43)
11823 Beaconsfield, Detroit 24, Mich.
Grimes, Ivan B. (45)
108 S. Linn St., Iowa City, Iowa.
Grimsrud, John (47)
1124 Belknap, Superior, Wis.
Grisham, Roland K. (49)
1236—12th St., Reedley, Calif.
Grisham, Van R. (48)
Route 2, Aberdeen, Miss.
Griswold, Kenneth S. (48)
75 State St., Albany, N. Y.
Grizzell, Jess L., Jr. (47)
4572 Parkview Pl., St. Louis, Mo.
Grobman, Frank H. (46)
831 N. Fifth St., Camden, N. J.
Grodman, Sidney (45)
645 Elizabeth Ave., Newark 8, N. J.
Groeber, Edward J. (49)
2685 W. Broad St., Columbus 4, Ohio.
Groff, Frank C. (46)
412 W. 3rd St., Cresco, Iowa.
Gronau, Arthur P. (47)
4959 Milwaukee Ave., Chicago 30, Ill.
Groner, Seymour (45)
509—16th St., San Mateo, Calif.
Groover, Gene (49)
401—41st St., Miami Beach 40, Fla.
Groshong, Clarence V. (49)
1414 N. E. Jarrett, Portland 11, Oreg.
Grosicki, Thaddeus Stanley (47)
St. Louis College of Pharmacy, St. Louis, Mo.
Grossman, Arthur P. (41)
698 Anderson Ave., Cliffside Park, N. J.
Gross, Abraham I. (27)
551 Blake Ave., Brooklyn, N. Y.
Gross, Emile A. (48)
114 Grijalva Dr., San Francisco, Calif.
Gross, Frank C. (45)
324 Hope St., Glenbrook, Conn.
Gross, Harry (46)
1402 Spruce St., Philadelphia 4, Pa.
Gross, Herbert M. (49)
Route 2, Eagle, Waukesha Co., Wis.
Gross, John H. (46)
Hemingford, Nebr.
Gross, Leon H. (49)
815 S. Long Beach Blvd., Compton, Calif.
Gross, William H. (28)
4730 Market St., Philadelphia 39, Pa.
Grossheim, Arthur J. (48)
4022 Runnymede Ave., Cincinnati 23, Ohio.
Grossman, Bernard (47)
1501 E. Cheltenham Ave., Philadelphia 24, Pa.
Grossman, Philip (47)
1314—50th St., Brooklyn 13, N. Y.
Grossman, Walter J. (41)
11 Fayette St., Cambridge, Mass.
Grote, Irvine W. (34)
50 South Crest Rd., Chattanooga, Tenn.
Grote, Rowland A. (47)
307 E. 30th St., Austin, Tex.
Groth, Edwin E. (48)
7224 Grand Ave., S., Minneapolis 8, Minn.
Grout, Joan L. (47)
2302 Oakes, Everett, Wash.
Grove, Donna (49)
1224 W. Broad, Columbus 4, Ohio.
Grove, Marjorie F. (49)
2315 West St., Pueblo, Colo.
Grover, Archie L. (49)
314 N. Cody, Hardin, Mont.
Groves, K. Deane (46)
c/o U. S. Industrial Chemicals, Inc., Rm. 2204, 123 S. Broad St., Philadelphia 9, Pa.
Groves, Kenneth S. (44)
1303 M St., Sweet Home, Oreg.
Grubb, Barbara C. (47)
570 Bush St., Mountain View, Calif.
GRUNN, BERN B. (28)
Alexandria, Ind.
Grubbs, Robert (46)
725 N. Bradshaw St., Montebello, Calif.
Grube, Alton G. (39)
1706 Lynnewood Dr., Havertown, Pa.
Gruber, George J. (46)
12310 Farringdon, Cleveland 5, Ohio.
Grubin, Joseph (46)
1505 Kings Hgwy., Brooklyn 29, N. Y.
Gruhin, Garson I. (45)
214 Harrison Ave., Jersey City 4, N. J.
Grunow, Olive (49)
2429 Helen, Detroit 7, Mich.
Grupe, Thomas E. (49)
1942 Hazel Ave., Salem, Oreg.
Grushon, Luther H. (46)
3 Niagara Ave., Dayton 5, Ohio.
Gruszewski, Walter J. (48)
3430 A N. Booth St., Milwaukee 12, Wis.
Gruz, Nathan I. (40)
3404 St. Ambrose Ave., Baltimore 15, Md.
Gryde, Stanley K. (48)
611 Rutledge Ave., Charleston 41, S. C.
Grzybowski, T. W. (45)
30 Fulton St., Lawrence, Mass.
Gualtieri, Anne C. (48)
11 S. Richmond Ave., Atlantic City, N. J.
Guanella, Edward A. (48)
1028 Randall, Rhinelander, Wis.
Guardabasco, Nicholas J. (47)
480 N. 7th St., Newark, N. J.
Guba, Frank M. (46)
738 N. Main St., Waterbury 26, Conn.
Guba, Paul A. (47)
2122 W. 11th, Gary, Ind.
Guber, Ida (45)
Faulkner Hospital, Jamaica Plain, Mass.
Gubin, Sidney H. (49)
742 N. 38th St., Philadelphia 4, Pa.
Guerrieri, Emidio (47)
73 Pleasant St., Morgantown, W. Va.
Gueth, Jacqueline C. (47)
54 1/2 E. Como Ave., Columbus, Ohio.
Guha, Dipendra S. (47)
School of Pharmacy, Purdue University, West Lafayette, Ind.
Guilbert, Amy N. (48)
P. O. Box 457, Chula Vista, Calif.
Guilbert, O. W. (44)
Box 457, Chula Vista, Calif.
Guilford, William W. (45)
2517—9th Ave., Oakland, Calif.
Guisado, Frank E. (45)
123 Mill St., Mt. Holly, N. J.
Gulanish, Sally (45)
7645 Middlepointe, Dearborn, Mich.
Gulesich, John J. (46)
1655 Harrison St., Philadelphia 25, Pa.
Gullotta, Pasquale Thomas (46)
262 Burnside Ave., East Hartford 8, Conn.
Gulpert, Abbette S. (46)
414 E. 94th St., Brooklyn 12, N. Y.
Gunderson, Irvin R. (47)
1350 Commerce Ave., Longview, Wash.
Gunderson, Samuel T. M. (48)
337—2nd Ave. E., Swift Current, Sask., Canada.
Gunn, James W. (48)
112—31st Ave., S., Nashville, Tenn.
Gunnoe, Honnie B., Jr. (48)
47 1/2 Elkhorn St., Welch, W. Va.
Gunter, Alfred S. (45)
609 Auburn Ave., Monroe, La.
Gunther, Earl (44)
1016 S. W. Taylor, Portland, Oreg.
Gurmendi, Gonzalo (48)
Jiron Huanta #173, Lima Dto., Peru.
Gurr, Errold H. (47)
R. R. 1, Caseyville, Ill.
Gustafson, Carroll B. (31)
155 George St., Arlington Heights, Mass.
Guth, Earl P. (38)
2996 Neil Ave., Columbus 2, Ohio.
Guthrie, Bernard H. (46)
6846 Greenleaf Ave., Parma Heights 9, Ohio.
Guthrie, C. L. (39)
130 South Ave., Petersburg, Va.
Gutierez, David (48)
P. O. Box 858, Los Gatos, Calif.
Gutowski, T. A. (49)
3946 S. Howell Ave., Milwaukee 7, Wis.
Gutkowski, Theodore E. (32)
4802 Edgepark Dr., Garfield Hts. 5, Ohio.
Gutterman, Isadore (46)
925 Main Ave., Passaic, N. J.
Guy, George A. (49)
87 Lenora, Seattle 1, Wash.
GUY, GEORGE H. (21)
c/o G. O. Guy, Drugs Office, 87 Lenora, Seattle 1, Wash.
Guyon, Robert (48)
2441 S. Meridian St., Indianapolis 2, Ind.
Gwinn, Howard M. (44)
505 Madison Ave., Anderson, Ind.

## H

Haack, Gordon W. (41)
Route 1, Box 701, Beaverton, Oreg.
Haag, H. B. (31)
Medical College of Virginia, Richmond 19, Va.
Haakenson, M. S. (48)
Hatton, N. Dak.

Haarer, Oscar H. (17)
113 W. Liberty St., Ann Arbor, Mich.
Haas, A. (44)
400 Main St., Box 46, Dallas, Oreg.
Haber, William D. (48)
14167 Cedargrove, Detroit 5, Mich.
Haberle, Martin F. (47)
3315 N. 52nd St., Milwaukee 10, Wis.
Haburay, Joseph K. (45)
15 W. Main St., Westboro, Mass.
Hackbarth, Walter A. (47)
70 N. Brown St., Rhinelander, Wis.
Hackendahl, Arthur H. (46)
1145 N. Jackson, Milwaukee 2, Wis.
Hackett, Joseph J. (46)
Ass't. Pharmacist U.S.P.H.S., c/o U. S. Marine Hosp., 40th & Penn. Ave., Pittsburgh, Pa.
Haddad, Amin S. (45)
American Univ. of Beirut, Beirut, Lebanon.
Haden, James T. (47)
Station Hospital, Bolling A. F. Base, Washington, D. C.
Hadley, Calvin M. (49)
4120 S. 9th Ave., Tucson, Ariz.
Hadley, Willard J. (41)
College of Pharmacy, Univ. of Minn., Minneapolis 14, Minn.
Haebler, P. E. (44)
c/o Goldschmidt Chemical Corp., 153 Waverly Pl., New York 14, N. Y.
Haefelin, Harry T. (30)
3760 N. Darien St., Philadelphia 40, Pa.
Haering, Mrs. D. W. (43)
205 W. Wacker Dr., Chicago 6, Ill.
Hafer, Harold R. (49)
107 Schiller St., Reading, Pa.
Hagan, Charles (42)
354—12th St., Santa Monica, Calif.
Hagan, Terry M. (48)
129 Main St., Lebanon, Ky.
Hagel, Bette (49)
1029 Park Ave., #113, Omaha, Nebr.
Hageman, Betty J. (47)
464 Western Ave., Albany 3, N. Y.
Hagemann, Edwin L. (49)
3728 N. Commercial, Portland 12, Oreg.
HAGEMANN, WILLIAM H. (10)
1001 N. 5th St., Quincy, Ill.
Hagen, Leonard (46)
13800 St. Clair Ave., Cleveland 10, Ohio.
Hagen, Otto F. (49)
2300 N. W. Thurmann, Portland 10, Oreg.
Hager, George P., Jr. (38)
Univ. of Maryland, 32 S. Greene St., Baltimore 1, Md.
Hager, Vernon E. (49)
Route 3, Nicholasville, Ky.
Hagey, G. A. (49)
5816 N. E. Cleveland Ave., Portland, Oreg.
Hagg, Alvin, (47)
912 N. E. 44th Apt. 3, Portland Oreg.
HAGGAR, THOMAS K. (33)
905 N. Broadway, Watertown, S. Dak.
Haggerty, John J. (46)
117 Parkview Ave., Weehawken, N. J.
Hagny, Louis C. (48)
463 Central Ave., Newark 7, N. J.
Hagood, Ralph J. (49)
3005 Hawthorne Ave., Richmond 22, Va.
Hahn, Elinore C. (45)
437 Pine St., Boulder, Colo.
Hahn, Joseph (49)
4650 N. Broad St., Philadelphia 40, Pa.
Hahn, Walter A. (44)
3520 N. 55th St., Milwaukee 10, Wis.
Hailer, Fred C. (49)
35 Augustus Ave., Boston, Mass.
Hailer, Jos. A. (36)
1342 Woodruff Ave., West Los Angeles, Calif.
Hailpern, Abe (46)
99 Quitman St., Newark 3, N. J.
Haimbach, Frank, III (47)
Apt. 25A, Parkway Apts., Haddonfield, N. J.
Haines, Howard G. (44)
c/o Haines Drug Store, Sandusky, Mich.
Haines, J. Harry (47)
414 Bendermere Ave., Interlaken, N. J.
Hairston, R. S. (49)
1801 E. 14th St., Winston-Salem, N. C.
Hait, Harry H. (47)
1164 Springfield Ave., Irvington 11, N. J.
Hait, Hyman J. (46)
106 Lennox St., Newark, N. J.
Hakes, Cyrus D. (39)
2542 Marion Ave., New York 58, N. Y.
Halbkat, John F. (49)
Webster, S. Dak.
Halboth, Homer M. (46)
2707 Brownsville Rd., Pittsburgh 27, Pa.
Hale, Virginia S. (47)
2511 Woolsey St., Berkeley 5, Calif.
Haleston, Chris (45)
c/o Haleston Drug Stores, Inc.
1003-1007 S. W. Broadway, Portland 5, Oreg.
Haley, Thomas (38)
4133 W. 22nd Pl., Los Angeles 16, Calif.
Hall, Alvah G. (28)
828 S. Sunset Canyon Dr., Burbank, Calif.
Hall, Annie M. (49)
1033 W. Grand Blvd., Detroit 8, Mich.
Hall, Dan (41)
Third and Broadway, Bismarck, N. Dak.
Hall, Donald E. (47)
267 W. Grand Ave., Wisconsin Rapids, Wis.
Hall, Donald V. (46)
c/o Haack Laboratories Inc., 1415 S. W. Harbor Dr., Portland, Oreg.
Hall, Dwight F. (49)
1801 K St., N. W., Washington 6, D. C.
Hall, Eddie R. (48)
Route 12, Box 842, Birmingham, Ala.
Hall, Edward (49)
134 E. Main, Medford, Oreg.
Hall, Judith (48)
22 Fifield St., Nashua, N. H.
Hall, Lawrence S. (47)
3209 Ash, R.F.D. 5, Independence, Mo.
Hall, Loren B. (46)
Pharmacy Dept., 808 S. Wood St., Chicago, Ill.
Hall, Millard B. (47)
Short Hills Pharmacy, 40 Chatham Rd., Short Hills, N. J.
Hall, Nathan A. (49)
Philadelphia College of Pharmacy, Philadelphia, Pa.
Hall, Orlando G. (37)
3818—7th St., N. W., Washington, D. C.
Hall, Robert (44)
Hamilton, Mont.
Hall, Stanton J. (47)
Medical & Dental Bldg., Everett, Wash.
Halley, Stanley G. (36)
482 Engle St., Englewood, N. J.
Halliday, J. E. (49)
Faculty of Pharmacy, Univ. of British Columbia, Vancouver, B. C., Canada
Halliday, T. D. (38)
230 Hogan St., Jacksonville, Fla.
Halliwell, Robert S. (47)
49 Park Ave., Lovell, Wyo.
Halloran, James F. (49)
413 Elder Dr., Toledo 12, Ohio.
Hallowell, Horace J. (45)
323 Main St., Danbury, Conn.
Halm, Clarence A. (45)
P. O. Box 1052, Glendale 5, Calif.
Halpern, Alfred (45)
College of Pharmacy, Duquesne Univ., Pittsburgh, Pa.
Haluska, L. A. (39)
2800 N. Adams St., Peoria, Ill.
Halverson, Clarence B. (49)
129 Lake Ave. W., Kirkland, Wash.
Halverson, Theo. C. (49)
Strum, Wis.
Ham, Ruth R. (46)
811 Hoover Ave., San Antonio, Texas.
Ham, Thomas J., Jr. (44)
Yanceyville, N. C.
Hamaker, Ambrose C. (47)
44 Mill St., Tecumseh, Mich.
Hamann, Charles Henry (46)
3422 S. Waring, Detroit 25, Mich.
Hamayan, Hmayak H. (33)
c/o Faisal Pharmacy, King Faisal II Sq., Baghdad, Iraq.
Hamilton, C. G. (39)
P. O. Box 517, Pompano, Fla.
Hamilton, Charles (45)
c/o Hamilton Drug Store, Georgetown, Ky.
Hamilton, George A. (45)
Regina General Hospital, Regina, Sask., Canada.
Hamilton, Ira J. (47)
1320 W. 5th St., Los Angeles, Calif.
Hamlett, C. M. (44)
Kimball, W. Va.
Hamlin, James G. (47)
4816 Higbee St., Philadelphia 24, Pa.
Hammel, Albert E. (47)
3113 Northway Dr., Baltimore 14, Md.
Hammel, Robert W. (47)
123 E. Gorham St., Madison, Wis.
Hammelmann, Norman E. (43)
4800 Goeth Ave., St. Louis 16, Mo.
Hammer, John L., Jr. (46)
1530 Spring Garden St., Philadelphia 1, Pa.
Hammerness, Francis C. (46)
c/o Pharmacy School, Montana State Univ., Missoula, Mont.
HAMMOND, ELMER L. (23)
Box 156, University, Miss.
Hammond, Henry L. (49)
Valley Forge General Hospital, Phoenixville, Pa.
Hammond, P. V. (44)
School of Pharmacy, Purdue Univ., West Lafayette, Ind.
Hamor, William A. (27)
Mellon Institute, 4400 Fifth Ave., Pittsburgh 13, Pa.
Hancock, Elizabeth W. (41)
5543 N. Denver, Portland, Oreg.
Hancock, Frank, O., Jr. (46)
1308 Hancock St., Chester, Pa.
Hancock, Harlow T. (47)
335 Burgess Ave., Indianapolis, Ind.
HANDSMAN, HARRY L. (32)
564 Linden Blvd., Brooklyn, N. Y.
Haney, Ned O. (49)
101 S. Side Square, Macomb, Ill.
Hanf, Louis M. (44)
3517 Beechway Blvd., Toledo, Ohio.
Hanig, Abner R. (49)
415 S. 8th St., Boise, Idaho.
Hankey, John J. (48)
7518½ Hoyne, Chicago 45, Ill.
Hanky, Donald E. (48)
4521 W. Seminary Ave., Richmond 22, Va.
Hanley, Harry (42)
1600 Broadway, Gary, Ind.
Hanmer, Howard H. (43)
Hanmer Drug Store, Hart, Mich.
Hanmer, Lauren R. (47)
Albany College of Pharmacy, Albany 3, N. Y.
Hanna, Hugh O. Jr. (47)
Varnville, S. C.
Hanna, Peggy E. (41)
232 Argo Ave., San Antonio 9, Tex.
Hanna, William M. (44)
1316 First Rd., Stansbury Estate, Baltimore 20, Md.
Hannah, Malcom E. (48)
208 Comeau Bldg., West Palm Beach, Fla.
Hannon, Harrison (46)
1000 Main St., Green Bay, Wis.
Hanscom, William W., Jr. (39)
Box 36, Lagunitas, Calif.
Hansen, Albert A., Jr. (47)
2927—3rd Ave., Council Bluffs, Iowa.
Hansen, Clarence Jr. (49)
2954 Virginia Park, Detroit 6, Mich.
Hansen, Doris J. (48)
1076 Euclid Ave., Berkeley, Calif.
Hansen, H. S. (40)
551 Grant Pl., Chicago 14, Ill.
Hansen, Herbert O. (46)
2 Ridge Road, S. E., Apt. 304, Washington 11, D. C.
Hansen, Hilmer N. (47)
Fort Harrison, Mont.

**Hansen, Kenneth A. (48)**
1061 Emerson St., Denver, Colo.
**Hansen, Mercedes K. (45)**
2213 Saranac Ave., Pittsburgh 16, Pa.
**Hanson, Harry G., Jr. (44)**
Hanson's Drug Store, 345 Congress St., Portland, Me.
**Hanson, Juell A. (48)**
Imperial, Nebr.
**Hanson, Kenneth E. (47)**
Hospital Div., U. S. Public Health Service, Washington, D. C.
**Hanson, Lois K. (45)**
95 S. El Camino Real, San Mateo, Calif.
**Hanson, Otto A. (47)**
7239 Lehmer Ave., Forest Park, Ill.
**Hanson, Ralph M. (44)**
Reg-Roc Rd., Falmouth Foreside, Me.
**Hanson, William S. (44)**
213 W. Adams, Creston, Iowa.
**Hara, Shuko Y. (37)**
3815 Winnemac Ave., Madison 5, Wis.
**Haracznak, John B. (47)**
1904 Kenneth Ave., Arnold, Pa.
**Harbaugh, Arthur Cleo (24)**
872 Mulberry Ave., Hagerstown, Md.
**Harber, James J. Jr. (46)**
Box 173, Commerce, Ga.
**Hardee, Aldridge K., Jr. (40)**
2907 Selwyn Ave., Charlotte, N. C.
**Harden, Wilton C. (37)**
9 Melvin Ave., Baltimore 28, Md.
**Hardesty, Marion V. (44)**
3801 W. Broadway, Louisville 11, Ky.
**Hardin, Martin S. (47)**
Savannah, Tenn.
**Harding, Chester E. (47)**
1328—22nd St., Santa Monica, Calif.
**Hardman, Charles (49)**
1001 Forbes St., Pittsburgh 19, Pa.
**Hardman, Thom (49)**
4256 San Juan, Jacksonville 5, Fla.
**Hardt, Robert A. (37)**
Hoffman LaRoche Co., Nutley, N. J.
**Hardwick, Marion Joe (48)**
943 Wilson Ave., Bristol, Tenn.
**Harfeny, Feris (47)**
1322 Monroe St., Brownsville, Tex.
**Hargesheimer, Oscar E. (49)**
Fitzsimons Gen. Hosp., Denver 8, Colo.
**Hargreaves, George Walter (26)**
124 Toomer St., Auburn, Ala.
**Hargreaves, Richard (47)**
6815 Mokelumne Ave., Oakland 5, Calif.
**Harig, Oscar (47)**
Home Savings & Loan Bldg., Youngstown 3, Ohio.
**Harkavy, Irving A. (45)**
40-13 Broadway, New York 32, N. Y.
**Harkness, Charles A. (46)**
410 W. 16th St., Hays, Kan.
**Harkness, Russell M. (43)**
c/o Harkness Pharmacy, 20313 Mack Ave., Grosse Pointe Woods 30, Mich.
**Harlan, Wilton O. (47)**
P. O. Box 130, Oroville, Calif.
**Harley, J. Burks (34)**
1101 O St., Lincoln, Neb.
**Harlocker, Charles S. (46)**
3138 N. E. 65th Ave., Portland 13, Oreg.
**Harms, Martha M. (46)**
1574 W. Harrison, Freeport, Ill.
**Harms, William A. (47)**
4426—2nd Ave., Los Angeles 43, Calif.
**Harnist, Milton J. (36)**
316—86th St., Brooklyn 9, N. Y.
**Harper, Doris L. (48)**
205 Cross St., Woodland, Calif.
**Harper, E. C. (40)**
Mangham, La.
**Harper, Merritt C. (39)**
224 E. Main St., Madison, Ind.
**Harper, William H. (38)**
2818 Sutton Ave., Maplewood 17, Mo.
**Harrel, Nicholas Murphy (47)**
Box 1231, Kingsville, Tex.
**Harrell, Lee W. (49)**
City Drug Store, Palatka, Fla.
**Harrington, Frank A. (47)**
230—4th St., Orland, Calif.
**Harrington, Richard A. (46)**
2171 Pacific Ave., San Francisco 9, Calif.
**Harrington, V. M. (39)**
Marianna, Ark.
**Harrington, William W. (41)**
2061 E. 77th St., Cleveland 3, Ohio.
**Harris, Allan Y. (45)**
56 Devonshire St., Boston 9, Mass.
**Harris, Celia (47)**
37 Dakota Ave., Buffalo, N. Y.
**Harris, George A. (47)**
442 N. Cicero Ave., Chicago 44, Ill.
**Harris, Hart, Jr. (44)**
87 Greendale Ave., Needham Heights, Mass.
**Harris, Heard (48)**
Cook's Rexall Drugs, McIntosh, Fla.
**Harris, John J. (49)**
13 Park Lane, East Walpole, Mass.
**Harris, Kenneth E. (47)**
270 E. 9th St., Cookeville, Tenn.
**Harris, Lewis Eldon (40)**
1920 Jefferson Ave., Lincoln, Nebr.
**Harris, Loyd E. (26)**
1313 Inglis, Columbus 8, Ohio.
**Harris, Norman (45)**
56 Devonshire St., Boston 9, Mass.
**Harris, Raymond Y. (46)**
412 N. 10th St., Temple, Tex.
**Harris, Richard E. (45)**
61 Locust St., Dayton, Ohio.
**Harris, Robert L. (45)**
241 N. Jackson, Roseburg, Oreg.
**Harris, Rowena Mae (49)**
743 Westbourne Ave., Zanesville, Ohio.
**Harris, Verne W. (46)**
Harris Drug Co., Washington, Kans.
**Harris, Walter A. (48)**
459 N. Hawlin Ave., Chicago, Ill.
**Harris, William (46)**
519 Albany Ave., Hartford 5, Conn.
**Harrison, Harry S. (25)**
5003 Harford Rd., Baltimore, Md.
**Harrison, Harville R. (48)**
2 Collier Rd., Apt. A, Atlanta, Ga.
**Harrison, Lyle D. (47)**
15745 Auburn St., Detroit 23, Mich.
**HARRISON, WILLIAM (22)**
Section AI, Area 200, 9500 St. Lawrence Blvd., Montreal 14, Que., Canada.
**Harrisson, Joseph W. E. (18)**
1921 Walnut St., Philadelphia 3, Pa.
**Hart, A. H., Jr. (49)**
100 W. Liberty, Vermilion, Ohio.
**Hart, Fanchon (17)**
115 W. 68th St., New York 23, N. Y.
**Hart, John C. (47)**
622 S. Sycamore Ave., Los Angeles 36, Calif.
**Hart, Joseph (49)**
408 Union St., Seattle 1, Wash.
**Hart, Merrill C. (31)**
Upjohn Co., Kalamazoo, Mich.
**Hart, Philip S. (49)**
Spring St., Williamstown, Mass.
**Hart, R. Franklin (49)**
4435 N. E. 35th Ave., Portland 11, Oreg.
**Harter, Council P. (49)**
932 Main St., Alturas, Calif.
**Hartford, Peter C. (47)**
17107 Grovewood Ave., Cleveland 10, Ohio.
**Hartgerink, Harold G. (48)**
Box 191, A.I.F.T., Phoenix, Ariz.
**Hartkopf, Ray (48)**
Bonduel, Wis.
**Hartley, Robert L. (46)**
732 N. Euclid St., Indianapolis 1, Ind.
**Hartman, Alfred H. (47)**
1171 Brandon Rd., Cleveland Hgts. 12, Ohio.
**Hartman, Barbara Louise (46)**
R. D. 3, East Stroudsburg, Pa.
**Hartman, Marybeth (44)**
328 N. Dubuque, Iowa City, Iowa.
**Hartman, Otto L. (46)**
Main St., New Egypt, N. J.
**Hartman, R. A. (49)**
886 E. 13th, Eugene, Oreg.
**HARTMAN, RUDOLPH ROLDIN (23)**
25 N. Baldwin Ave., Sierra Madre, Calif.
**Hartman, Wallace W. (46)**
3146 W. Bancroft St., Toledo 6, Ohio.
**Hartman, Walter M. (46)**
Ellis Hospital, Schenectady, N. Y.
**Hartung, P. G. (45)**
Peoples Drug Co., Cullman, Ala.
**Hartung, Walter H. (37)**
School of Pharmacy, Univ. of N. Carolina, Chapel Hill, N. C.
**HARTWIG, OTTO JULIUS (92)**
208 S. 3rd St., Maywood, Ill.
**Hartz, Allison (46)**
601 S. 4th, Grand Forks, N. Dak.
**Hartz, Benjamin Aster (45)**
2516—19th Ave., Rock Island, Ill.
**Hartzell, Kenneth A. (48)**
425 El Centro, South Pasadena, Calif.
**Harwick, Henry (30)**
269 S. Harrison St., East Orange, N. J.
**Harwood, A. A. (37)**
2223 S. Brookside Pkwy. Indianapolis 1, Ind.
**Hasegawa, Ellen (46)**
Angeles B Pharmacy, Port Angeles, Wash.
**Hasenbalg, Catherine (47)**
57 Montrose Ave., Jersey City 7, N. J.
**Haskell, Chas. C. (40)**
223 E. Main St., Richmond, Va.
**Haskins, Drewry E. (46)**
311 Hilltop Dr., Chattanooga, Tenn.
**Hasseld, Leland R. (46)**
4644 Stratford, Indianapolis 1, Ind.
**Hastings, James M. (48)**
3122 Lakeland Ave., Madison 4, Wis.
**Hatch, Edwin H. (49)**
Box 97, Wheeler, Oreg.
**Hatcher, Thomas T. (46)**
Amherst, Va.
**Hatchett, John Frank (48)**
Hatchett Drug Store, 701 Grant St., Denver 3, Colo.
**Hatfield, Charles L. (46)**
101 E. 2nd St., Seymour, Ind.
**Hatter, Florence Marie (45)**
1221 S. 58th Ct., Cicero 50, Ill.
**Hauber, Paul (49)**
834 S. Rutan, Wichita 9, Kans.
**Hauck, Chester M. (43)**
Rexall Drug Co. c/o Prod. Development, 8480 Beverly Blvd., Los Angeles 36, Calif.
**Hauck, Rudolf Otto (28)**
91 Woodland Ave., East Orange, N. J.
**Haueisen, Otto F., Sr. (47)**
1203 Dunn Ave., Richmond, Calif.
**Hauenstein, Armin H. (49)**
414 S. Main St., Bluffton, Ohio.
**Haug, Marvin B. (49)**
5601 St. Louis Ave., St. Louis 20, Mo.
**Haught, Willis R. (49)**
Walgreen Drug Store, Main & St. Ann Sts., Owensboro, Ky.
**Haughton, Helen L. (45)**
137 Elm St., San Mateo, Calif.
**Hauke, Albert P. (49)**
1720 Broadway, Scottsbluff, Nebr.
**Haupt, Charles S. (49)**
c/o Pharmacy, VA Regional Office, Columbia, S. C.
**Hausman, Melvin B. (46)**
5414 Chestnut St., Philadelphia 39, Pa.
**Havel, John (47)**
204 W. Ridge St., Lansford, Pa.
**HAVENHILL, L. D. (00)**
1539 Vermont St., Lawrence, Kans.
**Haverfield, Mary Emily (45)**
1885 Belmore, Cleveland 12, Ohio.
**Hawk, Asher M. (46)**
400 First Ave., Parkesburg, Pa.
**Hawkey, George D. (46)**
104 N. High St., Columbus Grove, Ohio.
**Hawkins, Harry L. (48)**
Toledo Drug Co., Toledo, Oreg.
**Hawley, Norma C. (16)**
Sherman, N. Y.
**Hawrylak, Olga (47)**
18½ Mercer St., Jersey City 2, N. J.
**Hawryliw, Paul (43)**
712 State St., Perth Amboy, N. J.
**Hawthorne, Kenneth C. (47)**
59 Hopper Ave., Pompton Plains, N. J.
**Hay, Charles R. (40)**
5857 Indianola Ave., Indianapolis 20, Ind.
**HAY, EDWARD ALLSTON (89)**
439 Cumberland Ave., Portland, Me.

Hayashi, H. T. (38)
2445 Huena St., Honolulu, Hawaii.
Hayashi, Matthew Katsuo (27)
1447 S. King St., Honolulu 46, Hawaii.
Hayba, Frank A. (45)
4105 W. 161st St. Cleveland 11, Ohio.
Haydel, Ernest Anthony (41)
1933 S. Gayosa St., New Orleans, La.
Hayden, David (41)
240 Central Park So., New York, N. Y.
Hayden, Emil A. (45)
P.O. Box 952, Madison 1, Wis.
Hayden, William S. (48)
5429 S. Lockwood Ave., Chicago 38, Ill.
Hayes, George A. (47)
9626 Compton Ave., Los Angeles 2, Calif.
Hayes, James M. (47)
Andrews, S. C.
Hayes, LeRoy J. (47)
2804 Garfield Dr., Rockford, Ill.
Hayes, P. A. (47)
Box 389, Greensboro, N. C.
Hayes, Richard O. (47)
Victory Drug Co., Warner Robins, Ga.
Hayes, Wallace S. (47)
1990—7th Ave., Apt. 11, New York 26, N. Y.
Hayes, William T. (49)
322 S. 3rd St., Rochelle, Ill.
Hayman, George C. (44)
12 E. Liberty St., Hubbard, Ohio.
HAYMAN, J. LESTER (24)
c/o Dept. of Pharmacy, West Virginia Univ., Morgantown, W. Va.
Hayman, Joseph Horace (45)
75 St. Nicholas Pl., Apt. 5-H, New York 32, N. Y.
Hayman, Sidney J. (46)
300 E. Central, Albuquerque, N. Mex.
Haymond, Paul M. (46)
238 S. Main St., Springville, Utah.
Haynes, Marvin C. (39)
4516 Harford Rd., Baltimore, Md.
Hays, Helen K. (48)
3840½ S. Figueroa, Los Angeles 37, Calif.
Hays, William O. (41)
Crile Central Hospital, 7300 York Rd., Cleveland 9, Ohio.
Hazelton, Homer W. (48)
25134 Van Dyke, Center Line, Mich.
Hazen, Arthur J., Jr. (48)
110 Washington Blvd., Oshkosh, Wis.
Hazleton, L. W. (40)
Box 333, Falls Church, Va.
Heacock, Clifton E. (48)
2322 N. Richland, Phoenix, Ariz.
Head, Charles C. (49)
R. R. 11, Box 128B, Toledo 7, Ohio.
Head, William W., Jr. (46)
6th & Madison, LaGrange, Ky.
Healan, Arthur L. (45)
1132 Market St., Chattanooga 1, Tenn.
Healey, Arthur J. (46)
49 Pleasant St., Portsmouth, N. H.
Healy, Roland G. (43)
P. O. Box 135, Big Rapids, Mich.
Heaps, E. Warren, Jr. (47)
35 Bonad Rd., Arlington 74, Mass.
Heard, Jack S. (45)
3121 Santiago St., San Francisco 16, Calif.
Heard, Robert A. (49)
1034 Main St., Arkadelphia, Ark.
Heath, Eugene O. (46)
2954 N. Sherman, Indianapolis 18, Ind.
Heath, Parker H. (38)
434 Morgan St., Decatur 80, Ill.
Hebberd, Edward S. (49)
107 S. Eleventh St., La Crosse, Wis.
Hebert, Andrew Cline (47)
330 Ave. B, Westwego, La.
Hebert, Gladys (43)
3129 Maurepas St., New Orleans, La.
Hebert, Henry E. (49)
134 Main, Van Buren, Me.
Hecht, Benjamin P. (46)
112 Glenway St., Dorchester, Mass.
Hecht, Harold (49)
122 Davis Ave., Brookline, Mass.
Hecht, Herman A. (45)
812 Leland, St. Louis, 5, Mo.
Hecker, Florence Ann (46)
8815 Pritchard Pl., New Orleans 18, La.
Hecker, U. J. (39)
8815 Pritchard St., New Orleans 18, La.
Heckler, L. A. (46)
1122 Carson St., Pittsburgh 3, Pa.
Heckman, Joseph C. (46)
315 Rice Ave., Girard, Pa.
Hedgpeth, Donald K. (45)
601 Irving St., San Francisco 22, Calif.
Heeley, Robert H. (49)
409 Miller St., Oriskany, N. Y.
Heffernan, Thomas F. (49)
20 Welles St., Waterbury 23, Conn.
Hegelmann, Julius, Jr., (43)
5 Club Blvd., West Orange, N. J.
Hegeman, Rolland L. (49)
Milton Junction, Wis.
Heichelbech, Norbert A. (37)
1451 Parsons Ave., Columbus 7, Ohio.
HEIDENREICH, ARTHUR C. (16)
1106 W. Spofford Ave., Spokane 12, Wash.
Heidenreich, W. F., Jr. (46)
96 Longue Vue Dr., Pittsburgh 16, Pa.
Heidick, Earl L. (46)
1523 St. Albans St., St. Paul 3, Minn.
Heifner, Max L. (49)
Box 45, Jamestown, Ohio.
Heilig, Harland E. (49)
9583 Ohio, Detroit 4, Mich.
Heilshorn, Kenneth N. (47)
437 Pacific St., Brooklyn, N. Y.
Heim, Christian (25)
North Ave., cor. East St., Pittsburgh, Pa.
Heim, Harold C. (47)
Univ. of Colorado, College of Pharmacy, Boulder, Colo.
Heimoff, Abraham (46)
U. S. Veterans Administration, 20 Washington Pl., Newark 2, N. J.
HEIN, HENRY F. (17)
600 Goliad St., San Antonio, Tex.
Heine, Darwin L. (45)
University Hosp. Pharmacy, Ann Arbor, Mich.
Heine, Frederick W. (41)
115 E. 82nd St., New York 28, N. Y.
Heine, Henry W. (39)
8 N. Senate Ave., Indianapolis, Ind.
Heine, Robert E. (46)
3508 N. Temple Ave., Indianapolis 1, Ind.
Heine, Robert H. (47)
Box 234, Steeleville, Ill.
Heinonen, Raymond G. (47)
240 S. 23rd St., Salem, Oreg.
HEINZ, JACK DONALD (47)
222 E. So. Temple, Salt Lake City 2, Utah.
HEINZ, JOHN B. (44)
222 E. S. Temple St., Salt Lake City, Utah.
Heinz, Kenneth W. (48)
1382 Emerson Ave., Salt Lake City, Utah.
Heinze, Clayton S. (44)
1631 Cleveland Ave., Niagara Falls, N. Y.
Heinzer, John Leonce (44)
933—46th St., Sacramento, Calif.
Heit, Edward M. (45)
304 Laurelton Rd., Rochester 9, N. Y.
Heitin, Aaron (49)
190 Chelsea St., East Boston 28, Mass.
Helbig, Frank J. (42)
7417 Kentucky, Dearborn, Mich.
Held, Samuel B. (45)
1651 St. Catherine St. West, Montreal 25, Quebec, Canada.
Helenore, John C. (46)
185 Madison Ave., New York, N. Y.
Helfert, Jerome F. (49)
248 Lorraine Dr., Kenmore 17, N. Y.
Helfrich, Howard D. (45)
507 Fairview Circle, Ypsilanti, Mich.
Helgren, Fred J. (47)
2004 Ash St., Waukegan, Ill.
Helgren, Glen T. (45)
P. O. Box 958, c/o Ellicott Drug Co., Buffalo 5, N. Y.
Heller, Aaron (39)
100-20—159th Ave., Howard Beach N. Y.
Heller, Charles (49)
656 Golf Terrace, Union, N. J.
Heller, Eugene (44)
4154 Lancaster Ave., Philadelphia 4, Pa.
Heller, Gershon L. (43)
2439 E. 74th St., Chicago 49, Ill.
Heller, I. Lawrence (41)
12810 Edmonton Ave., Cleveland, Ohio.
Heller, Morris (46)
3631 Westfield Ave., Camden, N. J.
Heller, Robert C. (46)
5224—11th Ave., Brooklyn 19, N. Y.
Heller, William M. (47)
Pharmacy Dept., Johns Hopkins Hospital, Baltimore 5, Md.
Hellerman, Rebecca C. (49)
1409—15th St., N. W., Washington 5, D. C.
Hemmer, Eugene V. (47)
301 W. 8th, O'Fallon, Ill.
Hemmingsen, Lester A. (48)
2137 S. E. Yamhill, Portland, Oreg.
Hemphill, F. P. (44)
101 N. State St., Jackson, Miss.
Henders, Norman A. (46)
904 Paloma, Burlingame, Calif.
HENDERSON, A. C. (25)
1405 N. Ft. Harrison Ave., Clearwater, Fla.
Henderson, H. E. (45)
14344—37th Ave., N. E., Seattle 55, Wash.
Henderson, James Allen (46)
122 Main St., Penn Yan, N. Y.
Henderson, Jean (47)
119 Graham Bldg., Jacksonville 2, Fla.
Henderson, Lauren R. (42)
100 E. 2nd St., Muscatine, Iowa.
Henderson, Marvin W. (47)
Henderson's Pharmacy, 7401 Harford Rd., Baltimore 14, Md.
Henderson, Ralph W. (43)
Winthrop-Stearns, Inc., Myerstown, Pa.
Henderson, William J. (47)
4406 W. Washington St., Indianapolis 21, Ind.
Hendler, L. Manuel (27)
1100 E. Baltimore St., Baltimore, Md.
Hendricks, Douglas H. (49)
1084 E. Second, S., Provo, Utah.
Hendricks, Lee L. (45)
2212 S. 6th St., Klamath Falls, Oreg.
Hendrie, William (48)
P. O. Box 597, Winchester, Va.
Heneson, Henry (43)
3021 Chelsea Terrace, Baltimore 16, Md.
Hennessy, William B. (44)
14184 Gratiot Ave., Detroit 5, Mich.
Hennig, Arnold J. (45)
1325 Rutledge St., Madison, Wis.
Henning, Walter A. (49)
115 S. Green St., Wichita 7, Kan.
Henning, William G. (49)
347 Melwood St., Pittsburgh 13, Pa.
Henrich, Karl John (43)
1420 Tower Ave., Superior, Wis.
Henriksen, Christian, Jr. (49)
48 Wade St., Jersey City 5, N. J.
Henry, Arthur Malcolm (13)
U. S. Food and Drug Administration, Room 416, New Post Office Bldg., Atlanta, Ga.
Henry, Charles M. (44)
1142 S. High St., Columbus 6, Ohio.
Henry, Clara M. (45)
526—35th St., Apt. 31, Oakland, Calif.
Henry, Donald J. (47)
119-B Pearce Lane, Tyndall Towne, Indianapolis 21, Ind.
Henry, Joe M. (46)
519 W. McKnight, Albuquerque, N. Mex.
Henry, Richard George (47)
622 Langdon, Madison, Wis.
Hente, Donald M. (47)
46 S. Henderson, Cape Girardeau, Mo.
Hephner, Raymond L. (46)
2153 Niagara Dr., Cleveland 7, Ohio.

**Heptonstall, William H. (45)**
Main St., West Dennis, Mass.
**Herbelin, Francis J. (46)**
914 Volante Dr., Arcadia, Calif.
**Herberger, H. D. (49)**
2100 Del Paso Blvd., N. Sacramento 15, Calif.
**Herbert, W. C. (43)**
Hdqts., ASU 6817, Univ. of Calif. Medical Sch., 3rd & Parnassus Aves., San Francisco 22, Calif.
**Herbes, Anthony J. (49)**
902 C, Coeur D'Alene, Idaho
**Herbst, A. L. (46)**
6752 W. Wells St., Wauwatosa 13, Wis.
**Herbst, Frederick G., Jr. (43)**
466 Patterson Rd., Dayton 9, Ohio.
**Herd, Addis E. (47)**
432½ S. Tipton, Visalia, Calif.
**Hereld, Peter C. (45)**
c/o Chemo Puro Mfg. Corp., 26–32 Skillman Ave., Long Island City, N. Y.
**Hergert, Carl H. (45)**
R. F. D. #1, Kirkwood, N. Y.
**Herman, Bernard (46)**
138 S. Crescent Hgts. Blvd., Los Angeles 36, Calif.
**Herman, Isadore, (48)**
1100 Parkside, Buffalo, N. Y.
**Herman, William J. (45)**
2418 Boudinot Rd., Cincinnati, Ohio.
**Hermann, Carl H. (46)**
21 W. 6th St., Helena, Mont.
**Hernandez, Hector R. (49)**
618 Quintana Pl., N. W., Washington 11, D. C.
**Hernandez, Humberto F. (45)**
San José St. #20, Box 762, Aibonito, Puerto Rico.
**HERNANDEZ Y CARTAYA, JULIO (17)**
308 Figuras, Havana, Cuba.
**Herndon, Grace (48)**
1614 W. 82nd St., Los Angeles 47, Calif.
**Herny, Stephanie G. (47)**
1104 Herron Ave., Pittsburgh 19, Pa.
**Herpel, Eleanor R. (49)**
1001 Trevilian Way, Louisville, Ky.
**Herrick, Arthur D. (48)**
39 Broadway, New York 6, N. Y.
**Herrmann, Karl F. O. (43)**
Red Cross Pharmacy, Manistee, Mich.
**Herse, Harry F. (49)**
Rockaway, Oreg.
**Hersey, Charles (36)**
Rugby, N. Dak.
**Hersh, Fred J. (38)**
511 W. Wisconsin Ave., Milwaukee 3, Wis.
**Hersh, Harry (43)**
157 N. Kenmore Ave., Los Angeles 4, Calif.
**Hersh, Jean G. (48)**
936 N. 19th St., Allentown, Pa.
**Hershberger, Willard E. (48)**
Riverside Apt. 263, Big Rapids, Mich.
**Hershman, Louis F. (47)**
S. E. Cor., 36th & Haverford Ave., Philadelphia 4, Pa.
**Hershman, Sherman (49)**
17 E. Terrace, McKees Rocks, Pa.
**Hershner, John F. (40)**
4500 Parkview Pl., St. Louis 10, Mo.
**Herskowitz, Clara D. (44)**
4900 Reistertown Rd., Baltimore, Md.
**Herskowitz, Julius (46)**
157 Golden Hill St., Bridgeport, Conn.
**Herter, Arthur C. (47)**
1521 Seminary Rd., Alexandria, Va.
**Herting, A. C. (18)**
15 N. Front St., Darby, Pa.
**Hertz, Samuel (48)**
37 Rutgers St., Irvington 11, N. J.
**Hertzler, Aldus K., Jr. (48)**
637 Kohn St., Norristown, Pa.
**Hertzog, Virgil R. (47)**
280 Main St., Worthington, W. Va.
**Hervert, Albie Cathryn (46)**
1105 Kirkwood Ave., Des Moines, Iowa.
**Hervey, Donald M. (49)**
1652 W. Eighth St., Erie, Pa.

**Herwitt, Maurice (49)**
147 S. W. 12th Ave., Miami, Fla.
**Herzel, Jacob F. (45)**
Harlem Rd. & Kensington, Snyder, N. Y.
**Herzenberg, Jerome D. (48)**
Main & Mattison Sts., Branchville, N. J.
**Herzog, Arthur C. (46)**
1941 Hertel Ave., Buffalo, 14 N. Y.
**Herzog, James A. (45)**
3168 Main St., Buffalo 14, N. Y.
**Hess, Arthur P. (36)**
148 Middle Ave., Elyria, Ohio.
**HESS, E. DEWEY (29)**
Russell, Iowa.
**Hess, John Henry, Jr. (47)**
Sealy, Tex.
**Hesse, Ernest C., Jr. (49)**
10 Sutherland Ave., Charleston 19, S. C.
**Hessman, Hugo Ernest (41)**
1025 Regent St., Madison, Wis.
**Hester, Fred (45)**
7214 Morton St., Dallas 9, Tex.
**Heston, Warner R. (47)**
1133 Belfield Ave., Drexel Hill, Pa.
**Hetterick, Raymond D. (44)**
920 E. Broadway, Glendale 5, Calif.
**Hetzel, C. Roy (49)**
Hetzel Bldg., Connellsville, Pa.
**Heustess, William F. (49)**
207 Garden St., Winnsboro, S. C.
**Hewitt, E. P. (45)**
2889 Camden Ave., Omaha 11, Nebr.
**Hewitt, Francis M., Jr. (47)**
114 S. Illinois Ave., Carbondale, Ill.
**Hewitt, Gordon (48)**
F-612 Waukamazoo, Petoskey, Mich.
**Hewitt, Harold G. (27)**
150 York St., College of Pharmacy, Univ. Connecticut, New-Haven, Conn.
**Hexter, Alfred C. (46)**
1541 Grove St., Berkeley 9, Calif.
**Heydorn, Curtis J. (47)**
556—3rd St., Brooklyn, 15 N. Y.
**Heyl, Charles A. (36)**
22 W. Ninth St., Erie, Pa.
**Heyl, Frederick William (23)**
c/o The Upjohn Co., Kalamazoo, Mich.
**Hibbard, Ralph S. (45)**
2599 Folsom St., San Francisco 10, Calif.
**Hickerson, John Russell (47)**
1459 El Miradero St., Glendale, Calif.
**Hickey, William C. (39)**
314 S. Main St., Fall River, Mass.
**Hicks, E. J. (47)**
Hillsville, Va.
**Hicks, Herman W. (47)**
Box 383, Ava, Mo.
**Hicks, J. Gilbert (49)**
225 N. Main St., Nicholasville, Ky.
**Hidalgo, Francisco (40)**
Calle 6 No. 54, Rpto. Benitez, Havana, Cuba
**Hidalgo, Gilberto (46)**
Box 178, Manati, Puerto Rico.
**Higger, S. F. (39)**
5017 Connecticut Ave., Washington, D. C.
**Higginbotham, A. C. (48)**
Box 157, Cullen, La.
**Higgins, Edward C. (47)**
125 N. 6th St., Quincy, Ill.
**Higgins, Harold R. (49)**
35 Harding Ave., Newington, Conn.
**Higgins, W. Mayo (44)**
130 Callan, Evanston, Ill.
**High, Roy T. (42)**
Gorgas Hospital, Box 77, Ancon, Canal Zone.
**Highland, Erick (45)**
3019 Menard St., Chicago, Ill.
**Higley, Rex (49)**
703—4th Corso, Nebraska City, Nebr.
**Higuchi, Takeru (48)**
Dept. of Pharmacy, 353 Chem. Bldg., Madison 6, Wis.
**Hilbert, Paul D. (47)**
649 Probasco, Cincinnati 20, Ohio.
**Hill, C. W. (45)**
c/o East Atlanta Pharmacy, 517 Flat Shoals Ave., S. E., Atlanta, Ga.
**Hill, Donald J. (46)**
2030 H St., Sacramento 15, Calif.

**Hill, Edith E. (44)**
67 Thomas Park, South Boston 27, Mass.
**Hill, Homer, L. (41)**
Towner, N. Dak.
**Hill, James S. (38)**
710 Maple Ave., Niagara Falls, N. Y.
**Hill, Meredith L., Jr. (47)**
Kingsland, Ga.
**Hill, William A. (43)**
91 N. Portage Path, Akron 3, Ohio.
**Hille, Hermann (46)**
6007 N. Lincoln Ave., Chicago 45, Ill.
**Hillebrecht, Herbert E. (40)**
7000 South Shore Drive Hotel, Chicago 49, Ill.
**Hillhouse, H. C. (47)**
2716—35th Ave., Birmingham, Ala.
**Hillman, Elmer C. (48)**
1207 N. Pitt St., Alexandria, Va.
**Hillyard, Ira (47)**
P. O. Box 147, Richmond, Utah.
**Hilsenhoff, Leslie (47)**
Manteno, Ill.
**Hilton, Emily K. (41)**
Socorro, N. Mex.
**Hilton, Evelyn M. (47)**
706 Seymour St., Vancouver, B. C., Canada.
**Hilton, William S. (48)**
Burnett Drug Co., Columbia, S. C.
**Hilts, Clayton E. (48)**
3286 S. Utah St., Fairlington, Va.
**Hilty, Wayne W. (47)**
331 N. Webster, Indianapolis 19, Ind.
**Himelick, Robert E. (46)**
The Upjohn Co., Kalamazoo, Mich.
**Hind, Harry W. (45)**
2638—40th Ave., San Francisco 16, Calif.
**Hindelang, Louis John, Jr. (47)**
416 Park Blvd., New Orleans 14, La.
**Hindman, William R. (41)**
7526 Gilbert St., Philadelphia 19, Pa.
**Hiner, L. David (40)**
School of Pharmacy, Univ. of Utah. Salt Lake City, Utah.
**Hines, Earl (49)**
R. D. 1, Fayetteville, N. Y.
**Hines, H. A. (44)**
521 E. Crawford, Van Wert, Ohio.
**Hines, Ray T. (49)**
922 S. 6th St., Louisville, Ky.
**Hirata, Edith T. (47)**
446 Lugo Ave., San Bernardino, Calif.
**Hirons, Kenneth D. (49)**
Everybody's Drug, Eugene, Oreg.
**Hirsch, Gus (46)**
736 Braddock Ave., Braddock, Pa.
**Hirsch, James M. (47)**
2601 Parkway, Apt. 441, Philadelphia 30, Pa.
**Hirsch, Samuel (49)**
3544 Dekalb Ave., New York 67, N. Y.
**Hirschel, Fred B. (47)**
1736 Belmont Ave., Apt. 603, Seattle 22, Wash.
**Hirschmann, David (49)**
1430 Queen Anne Rd., West Englewood, N. J.
**Hirsh, Samuel U. (49)**
51 Eagle St., North Adams, Mass.
**HIRZEL, HERMAN (22)**
c/o Dr. Hirzel Pharmaceutica, Stamfenbachstrasse 75, Zurich, Switzerland.
**Hissam, Richard E. (46)**
1652 Allison Ave., Indianapolis, Ind.
**Hitchcock, Earl C., Jr. (43)**
78 Main St., East Hampton, Conn.
**Hitchens, J. Orville (46)**
2006 Cedar St., Holt, Mich.
**Hite, Field M. (49)**
102 N. Sycamore St., Petersburg, Va.
**Hite, Wallace V. (47)**
3621 Laird St., Pittsburgh 12, Pa.
**Hitzelberger, Walter F. (47)**
9730 Regent St., Los Angeles 34, Calif.
**Hlavin, George E. (43)**
3140 Washington Blvd., Cleveland Heights, Ohio.
**Hoagland, John H. (34)**
365 George St., New Brunswick, N. J.

Hobart, Addison D. (47)
286 Pioneer St., Akron 5, Ohio.
Hoch, John Hampton (30)
Medical College of South Carolina, Charleston, S. C.
HOCH, QUINTUS (07)
2429 Frankford Ave., Philadelphia, Pa.
Hochheimer, Kurt (44)
417 Somerset St., Bound Brook, N. J.
Hock, Robert E. (46)
1107 S. 7th St., Ironton, Ohio.
HOCKING, GEORGE M. (33)
Univ. of New Mexico, College of Pharmacy, Albuquerque, N. Mex.
Hocking, Harold J. (47)
2021 Ravenswood Ave., Green Meadows, Hyattsville, Md.
Hodges, George A. (49)
1626 W. Pine, Wichita 3, Kans.
Hodgson, Harold B., Jr. (47)
c/o Moon-Winn Drug Co., Athens, Ga.
Hodnett, Hill J. (49)
Methodist Hospital, Dallas 8, Tex.
Hoehn, Arthur A. (39)
314 E. Grand St., Eau Claire, Wis.
Hoehn, Willard M. (45)
3120 Coleman Rd., Kansas City 2, Mo.
Hoel, Norman A. (47)
Cooperstown, N. Dak.
Hoelcle, Edward J. (45)
2325 Genesee St., Buffalo 11, N. Y.
Hoerl, John (49)
2905 Van Ness Ave., Apt. 506, San Francisco 9, Calif.
Hoeschler, James W. (49)
500 Main St., La Crosse, Wis.
Hoeser, Val B. (49)
213 W. Main St., Durand, Wis.
Hoevel, Melvin B. (48)
554 Taylor Mill Rd., Fort Thomas, Ky.
Hoff, Kenneth E. (47)
300 Fair St., Petaluma, Calif.
Hoffelt, Edward F. (46)
Estelline, S. Dak.
Hoffman, Anna L. (48)
1608 Madison Ave., Covington, Ky.
Hoffman, Archie E. (47)
3163 N. Illinois, Indianapolis 8, Ind.
Hoffman, Charles K. (49)
2015 Ballard, Las Vegas, Nev.
Hoffman, F. A. (49)
3 W. Jackson St., Millersburg, Ohio.
Hoffman, Isaac K. (47)
c/o Feingold, 160 S. Gramercy Pl., Los Angeles, Calif.
Hoffman, Kenneth H. (47)
134 W. Clinton, Hastings, Mich.
Hoffman, Melvin C. (46)
P. O. Box 91, Planada, Calif.
Hoffman, Paul A. (47)
205 E. Norwich Ave., Columbus 1, Ohio
Hoffman, Philip (47)
5714 Beacon St., Pittsburgh 17, Pa.
Hoffman, Philip H. (48)
1074 Prospect Rd., Ashtabula, Ohio.
Hoffman, Richard G. (48)
234 E. Orange St., Gainesville, Fla.
Hoffmann, Hugo O. (46)
3053 N. Stowell Ave., Milwaukee 11, Wis.
Hoffnagle, George F. (46)
513 Glenfield Ave., Glenolden, Pa.
Hofstetter, Harold F. (49)
3389 Collingwood Ave., Toledo 10, Ohio.
Hoft, Robert W. (47)
6820 Windsor Ave., Berwyn, Ill.
Hogan, John D. A. (47)
1612 W. Main St., Houston, Tex.
Hogan, John L. (49)
30 E. Main St., Wilkes Barre, Pa.
Hoge, Ernest Kenworthy (22)
1012 Main St., Wheeling, W. Va.
Hogg, George T. (49)
225 W. Miner, Yreka, Calif.
Hogg, Nancy (46)
315 S. J. St., Apt. 401, Tacoma, Wash.
Hoggard, Charles R. (48)
3602 T St., N. W., Washington 7, D. C.
Hogstad, Anton, Jr. (45)
Univ. of Toledo, College of Pharmacy, Toledo 6, Ohio.
Hohmann, Harry E. Jr. (49)
501 Bessemer Ave., East Pittsburgh, Pa.
Hohmann, Morgan R. (35)
800 Clinton St., Des Moines, Iowa.
Hoines, Elder G. (43)
c/o Hoines Pharmacy, Cresco, Iowa.
Hoitink, Leland B. (49)
347 E. Ferry St., Buffalo 8, N. Y.
Hokanson, Harry C. (47)
1514 Clough Ave., Superior, Wis.
Holbert, James M. (49)
415 Park Rd., Lookout Mountain, Tenn.
Holbrook, Robert L. (49)
Morehead, Ky.
Holck, Harald G. O. (39)
Univ. of Nebraska, College of Pharmacy, Lincoln 8, Nebr.
Holcomb, Winston L. (49)
V. A. Hospital Pharmacy, Fort Harrison, Mont.
Holden, Ethel M. (42)
1016 W. 31st St., Los Angeles 7, Calif.
Holden, Wilbur B. (47)
307 Ulloa St., San Francisco 16, Calif.
Holdreith, Clarence A. (47)
24541 Schoolcraft, Detroit 23, Mich.
Holland, Daniel A. (47)
2139 E. 70th St., Chicago 49, Ill.
Holland, James T. (49)
620 S. 44th St., Louisville 11, Ky.
Holland, John I., Jr. (48)
1148 Moreland Pl., S. E., Atlanta, Ga.
Holland, Madeline Oxford (39)
Lindsay Lane, Meadowbrook, Pa.
Holland, Owen, Jr. (40)
U. S. N. Bank Bldg., Galveston, Tex.
Hollander, Steven (39)
394 Park Ave., Rutherford, N. J.
Hollenback, Rand P. (47)
3134 N. High St., Columbus 2, Ohio.
Holley, David (46)
713 S. Lamar, Oxford, Miss.
Hollingsworth, Thelma N. (48)
940 National Ave., National City, Calif.
Hollmann, Julius W. (39)
P. O. Box 205, Shiner, Tex.
Holloway, James P. (47)
Box 848, University, Miss.
Holman, Leonard S. (47)
101 S. Market St., East Palestine, Ohio.
Holmes, MacKay D. (42)
17 S. Columbus Ave., Mt. Vernon, N. Y.
Holscher, Gilbert Henry (40)
333 Bradly St., Dubuque, Iowa.
Holsopple, Nell I. (49)
R. D. 2, Mariana, Pa.
Holst, Karl V. (47)
2324 N. 49th St., Omaha 4, Nebr.
Holsted, Darius L. (49)
Economy Drug Store, 200 Main St., North Little Rock, Ark.
Holstius, Elvin A. (49)
FPHA 419-3 Airport Rd., West Lafayette, Ind.
HOLT, EDWIN M. (27)
1819 G St., N.W., Apt. 615, Washington 6, D. C.
Holt, Julian W. (42)
505—23rd Ave., Meridian, Miss.
HOLTON, CHARLES WILLIAM (07)
Box 81, Essex Fells, N. J.
Holz, Erra (49)
1325 West Blvd., Racine, Wis.
Holzer, Joseph B. (43)
2208 N. Washington, Green Bay, Wis.
Holzmacher, George J. (46)
219-11 131st Ave., Springfield, L. I. 13, N. Y.
Homan, Gerald B. (46)
Enterprise, Oreg.
Homs, Jose M. (47)
97 General Hospital, APO 757, c/o Postmaster New York, N. Y.
Honigman, L. E. (47)
14945 Kercheval Ave., Grosse Pointe 30, Mich.
Hood, Edith C. (48)
Tod Pharmacy, Tooele, Utah.
HOOD, FRANK, Jr. (43)
962 N. Olney St., Indianapolis 1, Ind.
HOOD, LEANDER C. (44)
131 Ave. A, Turners Falls, Mass.
Hood, Max (49)
3704 N. 12th, Albuquerque, N. Mex.
Hood, N. Eugene (46)
425 E. Black St., Rock Hill, S. C.
Hood, R. C. (40)
223 Walton St., N. W., Atlanta, Ga.
Hook, Delbert L. (46)
Grayslake, Ill.
Hook, George B. (46)
204 Monroe St., Warren, Pa.
Hook, Warren D. (48)
734 Elm St., Ludlow, Ky.
Hooper, Alice D. (48)
5152 Oakland St., Los Angeles, Calif.
Hoover, Victor B. (41)
625 57th St., Kenosha, Wis.
Hope, Clarence E. (46)
349 W. Emerson St., Melrose 76, Mass.
Hope, J. Paul (47)
407 E. Lincoln Hwy., Coatesville, Pa.
Hopelain, Richard (48)
1733 Francisco St., Berkeley, Calif.
Hopkins, Ben B. (49)
54 Gilcrest, Bend, Oreg.
Hopkins, Howard (39)
Lizton, Ind.
Hopp, Marjorie (45)
440 Orange St., Newark 7, N. J.
Hoppe, James Oliver (43)
Sterling—Winthrop Research Institute, 33 Riverside Ave., Rensselaer, N. Y.
Hopper, Jetha C. (49)
316 S. 38th St., Louisville, Ky.
Hoppes, Richard H. (47)
270 N. Addison, Indianapolis, Ind.
Hopponen, Raymond E. (43)
College of Pharmacy, Univ. of Minnesota, Minneapolis 14, Minn.
Hopwood, Frank (48)
901 Cambridge Oval, San Antonio 9, Tex.
Horgan, Dennis J. (45)
126 Main St., Three Rivers, Mass.
Hori, Kei (47)
2656 Washington Blvd., Chicago 12, Ill.
HORLICK, A. J. (04)
P. O. Box 238, Racine, Wis.
Horn, Don C. (45)
812 Webster, Chillicothe, Mo.
Horn, Emil C. (38)
4500 W. Burleigh St., Milwaukee, Wis.
Horn, Gertrude M. (43)
School of Pharmacy, Washington State College, Pullman, Wash.
Horne, Guy E. (44)
2709 McDill Ave., Tampa, Fla.
Horne, Lewis D. (47)
Mt. Ayr, Iowa.
HORNE, WARREN WINSLOW (02)
124 Hay St., Fayetteville, N. C.
Horner, John F. (47)
2406 Southeastern Ave., Indianapolis 1, Ind.
Hornfeck, Ray J. (46)
539 Monongahela Ave., Glassport, Pa.
Hornikel, Gordon J. (48)
1411 Regent Ave., Cincinnati 29, Ohio.
Horovitz, Herbert J. (47)
841 Sheridan Ave., Pittsburgh 6, Pa.
Horowitz, A. G. (47)
507 Central Ave., Newark 7, N. J.
Horowitz, Harold (47)
c/o Horowitz Pharmacy, 32 Grove St., Elizabeth 2, N. J.
Horsch, Gertrude (39)
1092 Rushleigh Rd., Cleveland, Ohio.
Horvitz, Bernard H. (47)
1000 Grand Concourse, Bronx 56, N. Y.
Horwitz, Isadore (47)
1654 N. Smallwood St., Baltimore 16, Md.
Horwitz, Louis (43)
257 Central Ave., Jersey City 7, N. J.
HOSKINS, T. W. (35)
1226 Audubon Pkwy., Louisville 4, Ky.
Hosler, Robert L. (49)
221 Briggs St., Syracuse, N. Y.
Hosler, W. W. (30)
c/o Strong Cobb & Co., Inc., 2654 Lisbon Rd., Cleveland 4, Ohio.

Hostetler, Van (47)
1301 Broadway, Indianapolis 2, Ind.
Hosticka, Frank (48)
1535 S. Elmwood Ave., Berwyn, Ill.
Hotkin, Herman (47)
159 Sanford St., East Orange, N. J.
Hotkin, Irwin (44)
159 Sanford St., East Orange, N. J.
Hottinger, J. A. (48)
4554 Broadway, Chicago 40, Ill.
Houchins, Charles R. (43)
Crewe, Va.
Houck, Raymond F. (46)
630 W. Lafayette St., Norristown, Pa.
Hougen, Horace P. (49)
216 W. Main St., Durand, Wis.
Hough, Inez (47)
McIntosh, S. Dak.
Houghton, Louis H. (47)
Cheraw, Colo.
Houk, Paul W. (47)
1169 Lexington Ave., Akron 10, Ohio.
Hounsell, Clarence H. (47)
124 School St., Lakeport, N. H.
Houser, Dan W. (42)
11608 Jefferson E., Detroit, Mich.
Houser, W. H. (44)
Cherryville, N. C.
Houts, N. Lloyd (46)
4014 Avenue D, Austin, Tex.
Hovde, Margaret C. (48)
2815 Kelsey, Berkeley 5, Calif.
Hover, David L. C. (25)
Cloudcroft, N. Mex.
HOVER, WILLIAM AGDATE (95)
1227 E. Colfax Ave., Denver, Colo.
Hovey, Jack G. (49)
781 Washington St., Whitman, Mass.
Hovey, Reid Merlin (45)
2917 S. Buchanan St., Arlington, Va.
Hovland, G. B. (46)
Dawson, Minn.
Howard, C. H. (46)
c/o Snyder & Howard, Lakeview, Oreg.
Howard, Geraldine E. (45)
Philmont, N. Y.
Howard, Ronald Herbert (48)
397 Main St., Saint John, N. B., Canada.
Howard, William F. (47)
105 Mountfort St., Boston, Mass.
Howard, William T. (49)
U. S. Quarantine Station, San Juan, P. R.
Howell, Francis V. (46)
248 Madison St., Brooklyn 16, N. Y.
Howell, Thomas J. (46)
Pikeville, Ky.
Howie, Helen (44)
127 Pearl St., Denver 9, Colo.
Howsler, Benjamin T. (42)
1876 Laryendal Rd., South Euclid, Ohio.
Howington, Cleve L. (49)
200 Mary St., Talladega, Ala.
Howison, Irene S. (46)
2521 Alabama Ave., S. E., Washington 20, D. C.
Howland, Frank O., Jr. (47)
111 Valley Rd., Glen Rock, N. J.
Howland, J. A. (46)
Jordan, N. Y.
Hoxsie, Delton R. (41)
P. O. Box 475, La Grange, Ga.
Hoyt, John P. (39)
31 Ivy St., Stamford, Conn.
Hrejsa, Joseph F. (47)
2859 S. Pulaski Rd., Chicago 23, Ill.
Hrubitz, M. Caroline (48)
1417—41st St., Des Moines 11, Iowa.
Hubbard, Jesse Y. (49)
Route 2, Box 129, Louisville 9, Ky.
Hubbard, Winfield Scott (12)
4651 Mississippi St., San Diego 3, Calif.
Huber, Ciriac J., Jr. (43)
7553 Bergenline Ave., North Bergen, N. J.
Huber, Joseph (44)
4465 E. 131, Garfield Heights, Ohio.
Hudak, Edward S. (46)
200 Miller Ave., Duquesne, Pa.
Hudgins, Charles M. (47)
3426 Greenville, Dallas 6, Tex.
Hudson, Carl E. (47)
519 W. Center St., Paxton, Ill.
Hudson, George W., Jr. (47)
Stuart, Va.
Hudson, James H. (48)
P. O. Box 66, Rogersville, Ala.
Hudson, Paul R. (48)
Chief, Pharmacy Service, Veterans Adm. Hosp., Houston 4, Tex.
Hudson, Phil S. (44)
Box 466, Opelika, Ala.
Huellmantel, Alan B. (46)
133 S. Prairie Ave., Kalamazoo 50, Mich.
Huelsebusch, Hubert H. (43)
6106 Sunridge Dr., Cincinnati 24, Ohio.
Huepenbecker, Richard Wm. (44)
602 Geneva Ave., Toledo 8, Ohio.
Huff, Donald W. (47)
220 W. 7th St., Mishawaka, Ind.
Huff, S. W., Sr. (45)
301 McDonough Blvd., S.E., Atlanta, Ga.
Huffman, W. Glenn (47)
4217 Grantley Rd., Toledo 12, Ohio.
Hufford, Edna Allen (47)
1711 E. Thomas, Seattle 2, Wash.
Hughes, Charles E. (49)
2 Randall Ave., Norwich, N. Y.
Hughes, Charles M. (48)
919½ W. 62nd St., Los Angeles 44, Calif.
Hughes, Edward J. (24)
c/o Eli Lilly & Co., Indianapolis, Ind.
Hughes, Gladys (46)
Stillwater, N. Y.
Hughes, Harold T. (47)
106 Post Rd., Larchmont, N. Y.
Hughes, Jesse T. (46)
8th & Wesley Ave., Ocean City, N. J.
Hughes, John J. (47)
58 Lee Park Ave., Wilkes-Barre, Pa.
Hughes, Mary T. (48)
403—22nd St., Galveston, Tex.
Hughes, Thomas F. (47)
139 Morgan St., Holyoke, Mass.
Huisking, Chas. L. (44)
155 Varick St., New York, N. Y.
Hulen, Lee D. (48)
8231 Forest, Kansas City 5, Mo.
Hull, J. James (47)
P. O. Box 263, Edgemont Sta., East St. Louis, Ill.
Hull, Jacob J. (46)
Box 203 Edgemont Sta., East St. Louis, Ill.
Hullick, John H. (49)
4500 Edmondson Ave., Baltimore, Md.
Hultman, Bruce V. (49)
110 N. Sutter St., Stockton 1, Calif.
Humma, Henry H. (46)
317 Ferry St., Metropolis, Ill.
Humma, J. Bernard (49)
606 Market St., Metropolis, Ill.
Hummelsheim, Frieda U. (47)
3225 S. Jefferson Ave., St. Louis 18, Mo.
Humphrey, Herman A. (47)
608 Oak St., Newport, Ky.
Humphreys, Leta M. (46)
Heppner, Oreg.
Humphries, Hudon C. (48)
Plaza Pharmacy, Inc., Greenville, S. C.
Hunkins, Louise (47)
2401 Russell Ave., S., Minneapolis 5, Minn.
Hunnell, Robert F. (48)
909 S. Church St., Lodi, Calif.
Hunsche, Frederick (15)
Box 255, Winona Lake, Ind.
Hunt, Dewitt H. (39)
236 Columbia Ave., Berkeley 8, Calif.
Hunt, William Howard (33)
36 Fara Dr., Stamford, Conn.
Hunter, Robert W. (43)
990 Goodale, Blvd., Columbus 8, Ohio.
Huntsman, James H. (47)
615 Kingsbury, Dearborn, Mich.
Hupy, Leora B. (49)
4416 S. E. Milwaukie, Portland, Oreg.
Hurd, Betty Mae (45)
3900 W. Granville Rd., Worthington, Ohio.
Hurdle, Horace C. (40)
1101 West Clay, Richmond, Va.
Hurie, Wiley Lin (49)
500 S. Campus, Clarksville, Ark.
Hurley, Ann M. (47)
Oyster Bay Rd., East Norwich, L. I., N. Y.
Hurley, Edward J. (48)
1375 E. 91st St., Cleveland, Ohio.
Hurley, James R. (49)
302 Madison Ave., Monroe, Ga.
Hurley, V. A. (44)
204 W. First St., Albany, Oreg.
Hurt, Kenneth R. (49)
St. Ignatius, Mont.
Hurwitz, Raymond (43)
410 Garden St., Hartford, Conn.
Hurwitz, Samuel (46)
1420 S. Second, Louisville 8, Ky.
HUSA, WILLIAM J. (24)
Box 2625, University Station, Gainesville, Fla.
Huskinson, Edwin B., Sr. (49)
222 Vernon St., Roseville, Calif.
Hustead, Theodore Edward (47)
Wall, S. Dak.
Huston, Mervyn James (47)
Pharm. Dept., Univ. of Alberta, Edmonton, Alberta, Canada.
Hutchins, Norbert N. (47)
Watervliet, Mich.
Hutchison, George B. (42)
Medical Purveyor in Charge, U.S.P.-H.S. Supply Station, Perry Point, Md.
Hutsinpiller, C. L. (49)
Prestonsburg, Ky.
Huttinger, Harry H. (47)
Oxford Pharmacy, Hanna at Oxford, Fort Wayne, Ind.
Huttner, Max (47)
730 W. 183rd St., New York 33, N. Y.
Hutto, George F. (47)
2120—31st Ave., N., Birmingham Ala.
Hutton, Harold R. (49)
105 N. Main, Blackwell, Okla.
Hutton, Malcolm L. (41)
1753 W. Congress St., Chicago 12, Ill.
Huy, Curtis G. (48)
2608 Volta St., Pittsburgh 12, Pa.
HUYCK, C. LEE (27)
Box 215, Howard College, Birmingham 6, Ala.
Hyde, Charles W. (40)
629—16th St., Denver, Colo.
Hyde, John Frederick (46)
930 Sherman #303, Denver, Colo.
Hylden, Maurice W. (47)
Medical Procurement Office, 84 Sands St., Brooklyn 1, N. Y.
Hyma, Andrew M. (24)
349 Pine Ave., Holland, Mich.
Hyman, Arthur M. (49)
1902 E. 18th St., Brooklyn 29, N. Y.
Hyman, Mrs. Benjamin (44)
10 Fairfield Ave., Hartford 5, Conn.
Hyman, Stanley (46)
1326 Pacific Ave., Atlantic City, N. J.
Hynes, Jeremiah A. (20)
7028 N. Ridge Ave., Chicago 45, Ill.
Hynes, Thomas F. (45)
Bryn Mawr Hospital, Bryn Mawr, Pa.
Hysore, O. E. (41)
3561 N. 11th St., Philadelphia 40, Pa.
Hytowitz, Alfred I. (47)
2119 S. E. Elliott, Portland 14, Oreg.

## I

Iacobucci, Primo (45)
550 Charles St., Providence, R. I.
Iannace, Marcello (49)
6081 Hurlbut, Detroit 13, Mich.
Iannarone, Michael (40)
87 Cedar Ave., Newark, N. J.
Ichniowski, Casimer T. (29)
2010 Fleet St., Baltimore 31, Md.
Ickes, Sheldon D. (44)
127 S. Juliana, Bedford, Pa.
Idczak, Chester J. (49)
521 Galena St., Toledo 11, Ohio.

Ifft, Edward C. (46)
341 W. Penn Pl., Pittsburgh 24, Pa.
Iken, Alfred L. (47)
619 Lafayette Ave., Racine, Wis.
Iken, Joseph M. (47)
6410 Cates Ave., University City 5, Mo.
Iken, Justin F. W. (47)
833 College Ave., Racine, Wis.
ILHARDT, WILLIAM KELLERMAN (01)
108 S. Fillmore St., Kirkwood, Mo.
Ilkuvitz, Norman (37)
553 Miller Ave., Clairton, Pa.
Illescas, Rafael (41)
Chapultepec 123, Col. Ninos Heroes Gral Anaya, Mexico City, D. F.
Illg, Maria Irmgard (47)
5714 Blackstone Ave., Chicago 37, Ill.
Imbler, Russell, Jr. (47)
7509 Westfield Blvd., Indianapolis, Ind.
Imholt, Eugene B. (44)
1318 Royalton Rd., Toledo 12, Ohio.
Imsland, Albert H. (47)
713 W. Elm, Lodi, Calif.
Inashima, Osamu J. (47)
Jefferson Med. College Hosp., c/o Pharmacy Dept., Philadelphia 7, Pa.
Indyk, Simon (46)
1972 E. 8th St., Brooklyn 23, N. Y.
Infranco, Joseph P. (46)
126 Suydam St., Brooklyn, N. Y.
Inge, Rease (49)
125 Bolling Rd., Atlanta, Ga.
Ingersoll, DeForest (47)
3100 N. 27th St., Milwaukee 10, Wis.
Ingibergsson, Matthias (44)
Bjarkargata 10, Reykjavik, Iceland.
Ingolia, Joseph J. (48)
6240 Cameron Blvd., New Orleans, La.
Ingraham, Rex C. (47)
1224 Locust, West Des Moines, Iowa.
Ingram, Henry V. (45)
340 Broad St., Rome, Ga.
Ingram, Robert L. (46)
Rt. 2 Box 80, 54th St., Virginia Beach, Va.
Inouye, Tomoo (48)
115 N. Lake St., Gary, Ind.
Insley, Merrill Jay (43)
124 S. Main, Bellefontaine, Ohio.
Iraci, Charles A. (40)
5444—101st St., Corona, N. Y.
Irani, Roshan J. (48)
Roshni, off Cathedral Rd., Madras, India.
IRELAND, EDWARD J. (28)
6363 St. Charles Ave., New Orleans 15, La.
Ireland, Max E. (47)
1112 W. 6th St., Storm Lake, Iowa.
Irgens, James T. (47)
207 Main St., Williston, N. Dak.
Irish, Norma Royer (47)
445-1/4 S. Burlington, Los Angeles 5, Calif.
Irvin, Samuel W. (47)
104 N. Front St., Phillipsburg, Pa.
Irvine, Dave J. (47)
7401 Beverly Blvd., Everett, Wash.
Irwin, Andrew, Jr. (49)
430 Main, Dallas, Oreg.
Irwin, F. E. (43)
2636 Glenwood Ave., Youngstown, Ohio.
Irwin, John H. (48)
103 Park Lane, Baltimore 10, Md.
Irwin, Mildred, E. (49)
1535 E. 60th St., Chicago 37, Ill.
Irwin, William P. (45)
200 High St., Portsmouth, Va.
Isaacs, Jack R. (46)
1512 W. 4th St., Coffeyville, Kans.
Isacson, Carl John (48)
R.F.D. 1, Box 218, East Hampton, Conn.
Isele, Richard F. (49)
925 York St., Utica, N. Y.
Iserman, Clarence H. (49)
3679 Jackman Rd., Toledo 12, Ohio.
Ishijima, Teruo Terry (47)
1416 Geary St., San Francisco 9, Calif.
Isom, Maurice D. (47)
2901 Cherokee, St. Louis 17, Mo.
Isquith, Isidore (46)
Main St., Stamford, N. Y.
Israel, David (47)
730 E. 125th St., Cleveland 8, Ohio.
Israel, Harold (43)
805 Broadway, Newark 4, N. J.
Israel, Meyer (46)
1024 Avenue C, Bayonne, N. J.
Ito, Ikuko (47)
3070 Harrington, Los Angeles 6, Calif.
Iverson, Arthur M. (47)
Cambridge, Wis.
Iverson, Chris. J. (49)
801 W. 30th St., Indianapolis 23, Ind.
Iverson, Ida (20)
400—10th St., Worthington, Minn.
Ives, Logan M., Jr. (47)
404 Westover Blvd., Lynchburg, Va.
Ives, Raymond, L. (43)
503 W. Olney Rd., Norfolk 7, Va.
Ivey, Grover F. (45)
123 E. Gore Ave., Orlando, Fla.
Ivey, James F. (45)
1115 Shorewood Dr., Orlando, Fla.
Ivey, Joe A. (46)
446 Mound, Nacogdoches, Tex.
Ivins, T. Randall (47)
c/o Ivins-Jameson Drugs, Mulberry and Broadway, Lebanon, Ohio.
Ivory, Jeanne (46)
202 Kelly Ave., Pittsburgh 21, Pa.
Iwaki, Mary C. (47)
2459 Sacramento St., San Francisco 15, Calif.
Iwasaki, George K. (46)
247 Mission St., San Jose, Calif.
Iwata, Toshiko (45)
219 W. Clay St., Stockton, Calif.
Izumi, Elbert E. (47)
6148 S. Greenwood Ave., Chicago 37, Ill.

## J

Jaar, Benjamin A. (45)
c/o Farmacia Fordham, Jesus-Progreso y 20 de Julio, Barranquillo, Colombia, S. A.
Jack, Bernice June (45)
Nurses Home N. S. Hospital, Youngstown, Ohio.
Jacks, Alan W. (45)
307 Lehmann Bldg., Peoria 2, Ill.
Jackson, Arthur E. (48)
1305 Everett Ave., Oakland 2, Calif.
Jackson, Arthur J. (41)
16337 Plymouth Rd., Detroit 27, Mich.
Jackson, Eugene L. (47)
1322 W. Broad St., Richmond 20, Va.
Jackson, George H. (49)
Drain, Oreg.
Jackson, Henry S. (48)
1125 Third St., New Orleans, La.
Jackson, Holly Byron (47)
933 Van Ness Ave., Fresno 1, Calif.
Jackson, J. C. (49)
210 E. 13th St., Lumberton, N. C.
Jackson, Kenneth E. (49)
269 Noe-Bixby Rd., Reynoldsburg, Ohio.
Jackson, Leslie S. (49)
169 W. Pine St., Ponchatoula, La.
Jackson, M. Patricia (48)
Pharmacy Dept., Mary Fletcher Hospital, Burlington, Vt.
Jackson, Marvin M. (46)
1530-1/4 W. 35th St., Los Angeles 7, Calif.
Jackson, Percy H. (39)
Oak & Pacific Aves., Wildwood, N. J.
Jackson, Ralph L. (47)
Box 142, Jonesboro, Ark.
Jackson, Sidney J. (47)
63-33—98th Pl., Rego Park, N. Y.
Jackson, Vernon E. (47)
70 Vilsack St., Etna 23, Pa.
Jackson, Winfield S. (49)
2038 Lakeside Dr., Louisville, Ky.
Jacobs, Clyde E. (47)
P. O. Box 191, Lake Bluff, Ill.
Jacobs, Don G. (49)
8037 S. E. Stark St., Portland 16, Oreg.
Jacobs, Isidore (43)
434 Amboy Ave., Perth Amboy, N. J.
Jacobs, Jacob M. (48)
649 E. 28th St., Paterson 4, N. J.
Jacobs, Joseph M. (39)
127 Treadwell St., Hamden 14, Conn.
Jacobs, Lena C. (45)
896—18th Ave., Newark 2, N. J.
Jacobs, Louis A. (46)
116 N. Tenth St., Decatur, Ind.
Jacobs, M. L. (37)
Box 934, Chapel Hill, N. C.
Jacobs, Margarita (46)
9 Torres St., Ponce, P. R.
Jacobs, Mary Ruth (45)
Landesburg, Perry Co., Pa.
Jacobs, Sinclair Sartorius (15)
77 Auburn Ave., Atlanta, Ga.
Jacobsen, Elsie C. (49)
51 W. Philadelphia, Detroit 2, Mich.
Jacobson, Arthur (48)
1875 University Ave., New York 53, N. Y.
Jacobson, Arthur R. (39)
231 Ashburton Ave., Yonkers, N. Y.
Jacobson, Bennie (48)
517 N. Norton Ave., Los Angeles 4, Calif.
Jacobson, Lawrence Isaac (45)
673 Hazle St., Wilkes-Barre, Pa.
Jacobson, Raphael (47)
5057 N. Tripp Ave., Chicago 30, Ill.
Jacobson, Yvonne A. (49)
1850 Western Ave., R. D. 1, Box 518, Albany, N. Y.
Jacoby, Carl J. (45)
2034 S. 8th Ave., Maywood, Ill.
Jacoby, Hans F. (47)
5667 Waterman, St. Louis 12, Mo.
Jacoff, William (39)
839 Empire Blvd., Brooklyn, N. Y.
Jaffe, Robert (43)
53 Rhodes St., New Britain, Conn.
Jaffe, William M. (48)
123 W. Broadway, Paterson 2, N. J.
Jahier, John (49)
8500 Stony Island Ave., Chicago 17, Ill.
Jakob, John G. (41)
50 Slate Lane, Levittown, Hicksville, N. Y.
Jalkow, John (46)
194 Cooke St., Waterbury 33, Conn.
James, Arthur E. (38)
408 S. Walnut St., West Chester, Pa.
James, Chris J. (47)
Saint Joseph, La.
James, Edward M. (46)
Crewe, Va.
James, Emory A., Jr. (48)
309—16th St., Terre Haute, Ind.
James, Glen P. (47)
c/o James Drug Store, Wagner, S. Dak.
James, Robert W. (49)
775 S. W. 8th St., Miami, Fla.
Jameson, Joseph H. (48)
625-1/4—8th St., Beliot, Wis.
Jamieson, C. E. (41)
912 Hammond Bldg., Detroit 26, Mich.
JANDA, THOS. JOHN JOSEPH (13)
739 E. Ohio St., N. S., Pittsburgh, Pa.
Jandrall, Helen M. (49)
1709 S. W. Morrison, Portland 5, Oreg.
Janes, E. R. (43)
The Maltine Co., Morris Plains, N. J.
Jankovic, Mary (46)
4411 Baltimore Ave., Philadelphia 4, Pa.
JANNKE, PAUL JOSEPH (40)
College of Pharmacy, University of Conn. New Haven, Conn.
Janosik, Joseph S. (47)
104—6th St., Monessen, Pa.
Janssen, Walter A. C. (48)
2798 Diamond St., San Francisco 12, Calif.

Janzen, Darrell L. (46)
1835—7th St., Wasco, Calif.
Jaquith, Roy W. (43)
1638 Clay St., Topeka, Kans.
Jarecki, Chester A. (46)
1049 Columbia Ave., Chicago, Ill.
Jarmuzeski, John A. (44)
6247 Broadway, Cleveland 4, Ohio.
Jarrett, W. A. (40)
Creighton Univ., Omaha, Nebr.
Jarvis, Albert E. (43)
Pitman-Moore Co., Indianapolis 6, Ind.
Jarvis, Edward R. (48)
54 Elm St., Westfield, N. J.
Jashnoff, Louis H. (47)
1432 Clifford Ave., Rochester 7, N. Y.
Jasion, Leo Z. (43)
333 Franklin St., Elizabeth, N. J.
Jaske, Mary Ann (44)
1407 Haupt Ave., Richland, Wash.
Jason, John B. (47)
2954 S. Loomis St., Chicago 8, Ill.
Jaszewski, Arthur H. (47)
2371 S. 15th Pl., Milwaukee 7, Wis.
Jauregui, Manuel G. (49)
Quintiliano 4, Madrid, Spain.
Jay, George S. (47)
612 Sheridan, Shenandoah, Iowa.
Jayne, Leslie C. (38)
235 Eakins Rd., Manhasset, N. Y.
Jaynes, George B. (48)
Box 74, McCormick, S. C.
Jaynes, James R. (49)
Box 457, Greenville, Tenn.
Jedrzejewski, Frank Anthony (44)
1342 Broadway, Buffalo 12, N. Y.
Jeffcott, J. C. (49)
Rte. 1, Box 367, Independence, Oreg.
Jeffers, Cedric McClellan (44)
Scott and White Hospital, Temple, Tex.
Jeffrey, James George (47)
College of Pharmacy, Univ. of Saskatchewan, Saskatoon, Sask., Canada.
Jeffries, Martin (44)
3129 Brookhill Ave., La Crescenta, Calif.
Jeffries, Sampson F. (44)
Pitman-Moore Co., Indianapolis, Ind.
JELINEK, JOHN P. (07)
989 W. 7th St., St. Paul 2, Minn.
Jenkins, Betty J. (41)
Jenkins Pharmacy., Oak Hill, Ohio.
Jenkins, Charles N. (49)
3004 Buffalo Rd., Wesleyville, Pa.
Jenkins, George Donald (45)
2130 N. 3rd St., Harrisburg, Pa.
JENKINS, GLENN LLEWELLYN (28)
Purdue Univ., School of Pharmacy, Lafayette, Ind.
Jenkins, Howard J. (46)
Oak Hill, Ohio.
Jenkins, Joseph (44)
746 S. Lake St., Apt. 211, Los Angeles 5, Calif.
Jenkins, Kenneth G. (47)
515 S. Adams, Apt. 3, Olympia, Wash.
Jenkinson, Norman R. (47)
51 N. 5th Ave., Beech Grove, Ind.
Jennings, Herbert F. (47)
1446 Bridge St., N. W., Grand Rapids, Mich.
Jennings, Norma (47)
1139—25th St., Des Moines 11, Iowa.
Jensen, Arthur (46)
422 Bellinger St., Eau Claire, Wis.
Jensen, Edward S. (48)
167 San Miguel Rd., Pasadena 2, Calif.
Jensen, James W. (43)
117 W. Grand Ave., Eau Claire, Wis.
Jensen, Jess C. (48)
1415 S. W. Harbor Dr., Portland 1, Oreg.
Jensen, John (47)
San Juan Bautista, Calif.
Jensen, Raymond (46)
776 Ridgedale, Birmingham, Mich.
Jensen-Norman, Herbert J. (46)
Norman's Westside Pharmacy, W. Division and Baker Sts., Mt. Vernon, Wash.
Jenson, Earl M. (47)
2522 W. Capitol Dr., Milwaukee 6, Wis.

Jeppesen, Clarabelle (46)
4550 N. Borthwick Ave., Portland 11, Oreg.
Jepson, Paul J. (44)
706 S. Fifth Ave., W., Newton, Iowa.
Jeskewich, John (45)
3901½ E. 10th, Indianapolis 1, Ind.
Jeskewich, Mary Ann (44)
3901½ E. 10th, Indianapolis 1, Ind.
Jeter, Bayard (46)
4531 W. Seminary Ave., Richmond 22, Va.
Jeter, Frederic R. (48)
P. O. Box 68, Basking Ridge, N. J.
Jewell, James B. (40)
2 N. Main St., Niles, Ohio.
Jirik, Grace M. (48)
1225—5th St., S. E., Minneapolis, Minn.
Joel, Ida (45)
6513 Three Chopt Rd., Richmond, Va.
Johanson, Iver E. (46)
1458 Market St., Redding, Calif.
Johns, Gilbert B. (41)
1028 Bedford St., Johnstown, Pa.
Johns, Marion J. (47)
Hotel Collins, Jasper, Ala.
Johnson, A. Roy F. (38)
1600 W. Lake St., Minneapolis, Minn.
Johnson, Aina L. (45)
1003 Anza St., San Francisco 18, Calif.
Johnson, Albert B. (48)
701 Arnold Ave., Point Pleasant, N. J.
Johnson, Arthur L. (47)
Larimore, N. Dak.
Johnson, Byron K. (47)
689 Osborne St., Winnipeg, Man., Canada.
Johnson, Carl H. (35)
318 Chemistry Bldg., Gainesville, Fla.
Johnson, Carl M. (46)
1835 W. 103rd St., Chicago, 43 Ill.
Johnson, Carroll R. (47)
303 N. Second, Fairfield, Iowa.
Johnson, Charles H. (48)
Box 45, Siloam, Ga.
Johnson, D. B. R. (21)
Univ. of Oklahoma, Norman, Okla.
Johnson, Donald P. (48)
7426 Fairpark Ave., Cincinnati 16, Ohio.
Johnson, Ed. S. (46)
c/o Johnson's Drug Store, Box 1, Franklin, W. Va.
Johnson, Elmon R. (46)
389 Newport Ave., Wollaston 70, Mass.
Johnson, Elof F. (40)
119 Erdenheim Rd., Philadelphia 18, Pa.
Johnson, Frank B., Jr. (49)
1430 Beidler St., Muskegon, Mich.
Johnson, Frank G., Jr. (47)
Christiansburg, Va.
Johnson, Franklin K. (42)
3526 Gray St., Oakland 1, Calif.
Johnson, Frederick F. (35)
Cutter Laboratories, Berkeley 1, Calif.
Johnson, George R. (40)
102 Edgemont Ave., Montgomery, Ala.
Johnson, Gerald W. (48)
Box 576, Milaca, Minn.
Johnson, Girard G. (47)
1035 Mountain Blvd., Oakland 11, Calif.
Johnson, Harry V. (46)
Rt. 1 Box 157B, Carlsbad, Calif.
JOHNSON, HARVEY H. (23)
6648 W. Fairview Ave., Milwaukee 13, Wis.
Johnson, Haskell (48)
22 Butler St., Johnston, S. C.
Johnson, Henry D. (48)
Box 3082, Univ. Sta., Gainesville, Fla.
JOHNSON, HENRY STODDARD (27)
53 Florence Ave., New Haven 13, Conn.
Johnson, Herbert F. (45)
800 E. Franklin Ave., Minneapolis 4, Minn.
Johnson, J. Earl (46)
407 W. Broadway, Bradley, Ill.

Johnson, J. Le Grand (48)
225 E. North Ave., Baltimore 2, Md.
Johnson, Jack (48)
10060½ Commerce Ave., Tujunga, Calif.
Johnson, J. Homer (49)
29 S. State, Preston, Idaho.
Johnson, Jerome Herbert (40)
1424 Somerset Pl., N. W., Apt. B-4, Washington, D. C.
Johnson, John G. (47)
Grandview, Wash.
Johnson, John W. (48)
904 Capitol Ave., S. E., Atlanta, Ga.
Johnson, Joseph Le Grand, Jr. (49)
225 E. North Ave., Baltimore 2, Md.
Johnson, Kenneth B. (45)
50 AAF BU HQ AAF Asst. Chief Dir. Staff 1, Office of Air Surgeon, Washington 25, D. C.
Johnson, Leonard B. (49)
103 W. Main St., Smethport, Pa.
Johnson, Leonard L. (47)
1822—24th St., Des Moines 10, Iowa.
Johnson, Milton O. (48)
Polk, Nebr.
Johnson, Morris A. (47)
1334 Shields, Fresno, Calif.
Johnson, Richard W. (48)
402 Duluth Ave., S. Thief River Falls, Minn.
Johnson, Robert A. (49)
4206 James Ave., N., Minneapolis 12, Minn.
Johnson, Roy E. (37)
580 Alter St., Hazleton, Pa.
Johnson, Stanley E. (45)
722 Cleveland Ave., Beloit, Wis.
Johnson, Sylvester H. (46)
2028 Dickinson St., Philadelphia 46, Pa.
JOHNSON, THEODORE (11)
P. O. Box 750, Havana, Cuba.
Johnson, Vernon (46)
c/o Northside Drug Store, 1701 Douglas Ave., Racine, Wis.
Johnson, Walter P. (46)
2700 F St., Apt. 5, Lincoln 1, Nebr.
Johnson, William E. (42)
Box 396, Ancon, Canal Zone.
Johnson, William F., Jr. (47)
250 Bank St., Brownsville, Pa
Johnson, William S. (49)
Box 275, Grayson, Ky.
Johnson, William Wiley (31)
Box 541, University, Miss.
Johnston, A. G. (49)
123 E. Main, Three Forks, Mont.
Johnston, Anthony (47)
Littleton, N. C.
Johnston, Austin M. (40)
139 Chenango St., Binghamton, N. Y.
Johnston, Gene W. (49)
269 Greene St., New York 3, N. Y.
Johnston, Neal (46)
1821 Kenton St., Springfield, Ohio
Johnston, Ralph R. (42)
1560 Roslyn Rd., Grosse Pointe Woods 30, Mich.
Johnston, Wilbur E. (39)
178 Angell St., Providence, R. I.
Johnston, Wm. Lee (43)
Robert Packer Hospital, Sayre, Pa.
Johnston, Z. B. (49)
Brookneal Drug Co., Brookneal, Va.
Jones, Archie (47)
18959 Grass Lake Rd., Big Rapids, Mich.
Jones, Arthur William (45)
4846 Bradley Blvd., Apt. 21, Bethesda 15, Md.
Jones, Arvon J. (47)
c/o Pharmacy V. A. Hospital, McKinney, Tex.
Jones, Bertram F. (35)
19 Willowmere Ave., Montclair, N. J.
Jones, Carl L. (44)
903 S. Oak St., Arlington, Va.
Jones, Cecil D. (46)
2116 S. Harvard, Tulsa 4, Okla.
Jones, Chester E. (44)
1919 Riverside Dr., Jackson 22, Miss.
Jones, Claud C. (47)
Rt. 6, Fort Wayne, Ind.

Jones, Clifford S. (47)
1200 Cleveland Ave., N. W., Canton 3, Ohio.
Jones, D. D. (44)
100 N. Detroit St., Xenia, Ohio.
Jones, Donald E. (47)
150 N. Parkside, Chicago 44, Ill.
Jones, Donald M. (45)
1 Main, Natick, Mass.
Jones, E. Verle (47)
2927 Elm St., Bellingham, Wash.
Jones, Edward G. (44)
6129 W. Greenfield Ave., West Allis 14, Wis.
Jones, Edwin L. (48)
c/o Brown & Jones Co., 102 W. 26th St., Erie, Pa.
Jones, Ernest R. (39)
c/o Parke, Davis & Co., Detroit 32, Mich.
Jones, Frank J. (41)
121 Orchard Ave., Battle Creek, Mich.
Jones, G. Ivor (28)
1610 Burns Ave., Seattle 8, Wash.
Jones, H. H. (40)
Box 1038., Gulfport, Miss.
Jones, Helen E. (49)
360 Gladys Ave., Long Beach 14, Calif.
Jones, Hurd M., Jr. (45)
Acting Dean, School of Pharmacy, The Texas State Univ. for Negroes, Houston 4, Tex.
Jones, J. Claggett (37)
805 Overbrook Rd., Richmond 22, Va.
Jones, J. Harold (47)
507 Lincoln Ave., Alexandria, Ind.
Jones, James P. (43)
Rexall Drug Store, 839 Higuera St., San Luis Obispo, Calif.
Jones, James R. (47)
420 E. 16th Ave., Apt. 1, Denver 5, Colo.
Jones, James Wilson (28)
State Univ. of Iowa, College of Pharmacy, Iowa City, Iowa.
Jones, Learny F. (33)
R. D. 6, Cambridge, Ohio
Jones, Marguerite M. (49)
1122 S. Troost, Tulsa 10, Okla.
Jones, Mark E., Jr. (46)
1204 Victory, Graham, Tex.
Jones, Ralph R. (48)
1236 S. Fourth St., Alhambra, Calif.
Jones, Ralph W. (47)
925½ N. 9th, Lafayette, Ind.
Jones, Richard S. (46)
1344 D St., San Bernardino, Calif.
Jones, Robert E. (49)
21401 Sloan Dr., Apt. 109, Detroit 24, Mich.
Jones, Robert W. (47)
612 The Alameda, Middletown, Ohio.
Jones, Roy L. (48)
1304 S. W. Jefferson, Portland 1, Oreg.
Jones, Thomas W. (39)
4123 Gaviota Ave., Long Beach, Calif.
Jones, Thoran (46)
Ardmore, Tenn.
Jones, Wallace O. (48)
c/o Winthrop-Stearns, Inc., 349—9th St., San Francisco 3, Calif.
Jones, William B. (49)
6701 Harford Rd., Baltimore 14, Md.
Jones, William R. (49)
305 S. Warman, Indianapolis 22, Ind.
Joniec, John J. (48)
2227 Danforth, Hamtramck 12, Mich.
Jonsson, Sigurdur (44)
c/o Biochemical Research Foundation, Newark, Del.
Jordan, Howell R. (39)
125½ W. 7th, Austin, Tex.
Jordan, Hugh D. (43)
4708 Sycamore St., Dallas 4, Tex.
Jordan, Joseph E. (46)
5115 E. North St., Indianapolis 1, Ind.
Jordan, Norman E. (48)
626 Monroe St., Santa Rosa, Calif.
Jordan, Thomas D. (47)
804 W. Washington, Greenwood, Miss.
Jordan, Wendell E. (47)
Keosauqua, Iowa.
Jordan, William C. (49)
107½ Ford, Monroe, Ga.
Jordin, Marcus W. (47)
Rt. 4, Idaho Falls, Idaho.
Jorgensen, Paul S. (48)
83 El Bonito Way, Millbrae, Calif.
Jorgensen, Wm. O. (46)
108 W. Diamond Lake Rd., Minneapolis 19, Minn.
Jorgenson, Stuart M. (48)
320¾ W. 84th Pl., Los Angeles 3, Calif.
Jorgenson, Virginialee (46)
2224 S. 47th St., Lincoln 6, Nebr.
Joseph, James T. (43)
2752 Blaine, Detroit 6, Mich.
Josey, E. M. (39)
213 St. Clair St., Frankfort, Ky.
Joslyn, A. W. (46)
1911 Taylor Ave., Racine, Wis.
Joslyn, Dean B. (48)
370 W. Clinton St., Elmira 1, N. Y.
Joswick, Ludwig (47)
474 Brace Ave., Perth Amboy, N. J.
Joy, Frank (49)
1108 Lyell Ave., Rochester 6, N. Y.
Joyner, Henry M. (49)
Adairville, Ky.
Jozwick, Hilary J. (48)
912 Main St., Oregon City, Oreg.
Judd, Charles A. (47)
1200 W. Marion St., Elkhart, Ind.
Judd, Cornelius M. (19)
615—10th Ave., S.W., Rochester, Minn.
Judd, Donald B. (48)
7 Coolidge Rd., Buffalo 20, N. Y.
Judd, Joseph C. (47)
1823 Tallman Ave., Indianapolis 1, Ind.
Judge, Charles G. (47)
256 Jefferson Dr., Pittsburgh, Pa.
Judis, Joseph (49)
Stanley Coulter Hall, Purdue Univ., West Lafayette, Ind.
JUDISCH, GEORGE (13)
P. O. Box 8, Main Post Office, Ames, Iowa.
Judy, Marian H. (20)
210 Virginia Ave., Petersburg, W. Va.
Juhnke, Frank F. (45)
6401 S. W. Macadam Ave., Portland 1, Oreg.
Julian, Ernest Simpson (47)
2 John Ross Rd., Rossville, Ga.
Jundt, George A. (46)
1028 N. Brighton St., Burbank, Calif.
Jung, Lorraine Anne (47)
5356 S. Winchester Ave., Chicago 9, Ill.
Jung, Warren (42)
532 B Rd., Damon Tract, Honolulu 38, Hawaii.
Junker, William A. (49)
10 Mellen St., Dorchester 24, Mass.
Juntunen, John P. (39)
1243 Screenland Dr., Burbank, Calif.

## K

Kaegi, M. C. (41)
3811 N. E. Wistaria Dr., Portland, Oreg.
Kaelin, Claude G. (46)
527 N. 9th St., Buhl, Idaho.
Kaempf, Edward J. (48)
404—42nd St., Oakland 9, Calif.
Kafalas, Nicholas A. (49)
240 Merrimac St., Newburyport, Mass.
Kafrissen, Ancel (47)
1624 W. Olney Ave., Philadelphia 41, Pa.
Kahl, Leonard P. (47)
920 Jay St., Sacramento 16, Calif.
Kahler, Dean F. (47)
R. D. 4, c/o Kahler's Pharmacy, West Chester, Pa.
KAHLER, MRS. LOUIS (16)
4517 Park Heights Ave., Baltimore 15, Md.
Kahn, Harry (49)
2123 Dorothy Ave., Louisville 5, Ky.
Kahn, Jerome (45)
88 Park Ave., West Caldwell, N. J.
Kahn, Milton (48)
212 W. Main St., Somerville, N. J.
Kahn, Simon (45)
2890 Delaware, Kenmore 17, N. Y.
Kahoe, Walter (48)
J. B. Lippincott Co., E. Washington Sq., Philadelphia 5, Pa.
Kalachnik, John (47)
1060 N. Spaulding, Chicago, Ill.
Kalaher, Arthur W. (47)
82 Forest Ave., Pearl River, N. Y.
Kalionzes, Peter W. (47)
1101 Pearl St., Santa Monica, Calif.
Kalish, Morton M. (46)
94-47 Plattwood Ave., Ozone Park, N. Y.
KALISH, OSCAR G. (00)
161 W. 75th St., New York, N. Y.
Kaliski, Chester F. (44)
525 Junction Ave., Toledo 7, Ohio.
Kallenbach, Richard M. (49)
263 N. Firestone Blvd., Akron, Ohio.
Kalty, Louis E. (44)
2346 Third Ave., New York 35, N. Y.
Kamenetsky, Irving (49)
665 Beck St., Bronx 55, N. Y.
Kamine, A. B. (49)
136 Clover St., Athens, Ga.
Kaminkowitz, Louis (47)
1601 Westchester Ave., New York 59, N. Y.
Kaminski, Edward F. (49)
c/o Hotel Rumely La Porte, Ind.
Kaminski, Felix H. (34)
3138 O'Donnell St., Baltimore 24, Md.
Kaminsky, Abraham M. (48)
176 Main St., Matawan, N. J.
Kaminsky, Charles William (22)
c/o J. H. Lease Drug Co., State & Lincoln Sts., Salem, Ohio.
Kamm, Oliver (21)
365 Lakeshore Rd., Detroit 30, Mich.
Kammer, William H. (39)
701 E. Preston St., Baltimore, Md.
Kandiner, William (48)
147-06—38th Ave., Flushing, N. Y.
Kane, Joseph H. (48)
250 Point Lobos Ave., San Francisco 21, Calif.
Kametsky, Herman (46)
2433 S. 6th St., Philadelphia 48, Pa.
Kanfer, Daniel (47)
c/o Moby Drugs, Inc., 216 Main St., Farmingdale, L. I., N. Y.
Kanicski, Joseph C. (46)
62 Main St., Thomaston, Conn.
Kanig, Joseph L. (47)
625 Ocean Ave., Apt. 2-H, Brooklyn 26, N. Y.
Kannabiran, B. M. (47)
3 Osborne Rd., Bangalore, India.
KANTNER, LEAHMER M. (14)
2411 N. Charles St., Baltimore, Md.
Kantor, Alan J. (47)
4227 Montgall, Kansas City 4, Mo.
Kantor, Max (49)
850 Washington Ave., Miami Beach 39, Fla.
Kantrowitz, Harry O. (49)
Cushing V. A. Hospital, Framingham, Mass.
Kaplan, David L. (42)
4101 Bryan, Dallas 4, Tex.
Kaplan, Harry (45)
347 Starin Ave., Buffalo (16), N. Y.
Kaplan, Herbert B. (49)
75½ Jackson Ave., Jersey City 5, N. J.
Kaplan, Hyman C. (47)
Main St., Fleischmanns, N. Y.
Kaplan, Jacob (48) 56 Florence Ave., Revere, Mass.
Kaplan, Jacob (48)
230 Main St., Ridgefield Park, N. J.
Kaplan, Joseph (48)
Center Pharmacy, 251 Main St. Fort Lee, N. J.
Kaplan, Louis (45)
National Package Drugs, Inc., 4200 N. Union, St. Louis 15, Mo.
Kaplan, Martin H. (46)
101-40 108th St., Richmond Hill, 19, N. Y.
Kaplan, Norman (48)
55 Westmore Rd., Mattapan 26, Mass.
Kaplan, Philip (49)
139 Schenectady Ave., Brooklyn 13, N. Y.

Kaplan, Stanley (47)
205 S. Rhode Island Ave., Atlantic City, N. J.
Kaplovitz, George (47)
329 Shirley St., Winthrop 52, Mass.
Kapps, Frank L. (49)
16167 Dale St., Detroit 19, Mich.
Kappus, George J. (47)
248 York St., Elmhurst, Ill.
Kaprielian, Manassch (34)
Pharmacie Nahr, Rue En-Nahr, Beyrouth, Lebanon.
Kapsner, Alex L. (49)
Princeton, Minn.
Kapusta, Dolores A. (45)
c/o Pharmacy, Johns Hopkins Hospital, Baltimore 5, Md.
Kara, Frank V. (38)
16 S. Peoria St., Chicago, Ill.
Karam, Joseph A. (46)
P. O. Box 480, Shreveport 1, La.
Karch, Edward G. (46)
412 Lafayette St., Newark 5, N. J.
Karelitz, David (48)
658 Salem Ave., Elizabeth, N. J.
Karetzky, Isaac (46)
1984-86 Washington Ave., New York 57, N. Y.
Kargul, John D. (38)
15182 Woodbine, Detroit 23, Mich.
Karl, Raymond D. (46)
2113 Gallier St., New Orleans 17, La.
Karman, John T. (48)
41 Richfield St., Dorchester 25, Mass.
Karnis, Michael R. (47)
1204 Third Ave., Conway, Pa.
Karp, David (42)
10848 W. Seven Mile Rd., Detroit 21, Mich.
Karp, Jack A. (46)
2528 N. 29th St., Philadelphia 32, Pa.
Karpel, Gary (45)
2524 Ninth Ave., Oakland 6, Calif.
Karsh, Frieda (41)
2130 Maplewood Ave., Richmond 20, Va.
Kart, Philip (47)
1365 Carroll St., Brooklyn 13, N. Y.
Kasdin, Joseph (48)
1 W. Broad Sts., Paulsboro, N. J.
Kasdin, Julius (49)
Box 646, Miami Beach 39, Fla.
Kaskey, Richard A. (49)
12th & Hamilton Sts., Philadelphia 23, Pa.
Kaski, I. J. (38)
3121 S. 55th Ct., Cicero 50, Ill.
Kaspriak, Frederick (47)
6347 Ternes Ave., Dearborn, Mich.
Kassaris, Pericles N. (43)
880 Massachusetts Ave., Cambridge, Mass.
Kassenoff, Charles (47)
77-39 Vleigh Pl., Flushing, N. Y.
Kaszeski, Florence C. (46)
5460 S. Kedzie Ave., Chicago 32, Ill.
Katsaros, George (47)
8214 S. Ellis, Chicago, Ill.
Katterman, Don B. (47)
1121-17th, Apt. A, Seattle 22, Wash.
Katz, Benjamin (47)
407 Aldrich Ave., N., Minneapolis 5, Minn.
Katz, Benjamin N. (49)
15-17 Branson St., LaFontaine, Ind.
Katz, Erich (49)
P. O. Box 66, Hughsonville, N. Y.
Katz, Irving (45)
2940 W. 17th St., Brooklyn 24, N. Y.
Katz, John, Jr. (48)
116 Prospect St., East Orange, N. J.
Katz, Martin (47)
2940 W. 17th St., Brooklyn 24, N. Y.
Katz, Max W. (41)
439 Washington St., Newark, N. J.
Katz, Oscar S. (46)
210 Franklin St., Bloomfield, N. J.
Katz, Samuel (47)
720 Stanley St., New Britain, Conn.
Katz, Samuel S. (36)
25 Anna St., Fords, N. J.
Katz, Simon L. (49)
176 Quincy St., Roxbury 21, Mass.
Katzky, Jerome E. (49)
4237 N. Mississippi, Portland 11, Oreg.

Kaufer, Sidney (46)
1702 B St., Belmar, N. J.
Kauffman, Burt C. (48)
1529 Union, Memphis, Tenn.
Kaufman, Abraham (39)
33 Riverside Dr., New York, N. Y.
Kaufman, Jacob Philip (39)
482—6th Ave., New York, N. Y.
Kaufman, K. L. (41)
Butler Univ., College of Pharmacy, Indianapolis, Ind.
Kaufman, Morton (44)
1613 Avenue M, Brooklyn 30, N. Y.
Kaufman, Saumel H. (49)
2003 S. E. Hawthorne, Portland 15, Oreg.
Kaufman, Sydney W. (48)
241 Claremont Ave., Mt. Vernon, N. Y.
Kaufmann, Theodore Roosevelt (43)
427 W. Tabor Rd., Philadelphia, Pa.
Kautz, Paul W. (48)
757 Kimball Pl., Columbus 5, Ohio.
Kavanagh, Marie K. (49)
5516 Cedar Ave., Philadelphia 43, Pa.
Kaville, F. M. (42)
1891 Windsor Rd., San Marino 9, Calif.
Kawwaf, Hasan M. (47)
Latakia, Republic of Syria.
Kay, Clyde Elkins (43)
6437 Calmont, Fort Worth, Tex.
Kay, L. (48)
c/o Park Drug Co., 147 W. 15th St., New York 11, N. Y.
Kay, Simon (46)
802 Avenue U, Brooklyn 23, N. Y.
Kayatta, Eugene V. (47)
36 Chestnut Grove Ave., R. F. D. 2, Valley Falls, R. I.
Kaye, Edward O. (46)
270 Empire Blvd., Brooklyn 25, N. Y.
Kaye, Harry (35)
Whelan Stores Corp., 82—39th St., Brooklyn 32, N. Y.
Kaye, Harry (45)
1536 Grand Concourse, Bronx, 57, N. Y.
Kaye, Louis H. (47)
1069 Bergen St., Newark, N. J.
Kazin, Louis E. (46)
2071 Main St., Bridgeport 4, Conn.
Kazmerski, Irene (48)
Webster Hall Hotel, Pittsburgh 13, Pa.
Keagle, Leroy C. (46)
Univ. of Buffalo, School of Pharmacy, Buffalo 14, N. Y.
Kealey, J. V. (49)
512 Clay Ave., Jeannette, Pa.
Kearney, Michael Joseph (45)
103 Dean Ave., Franklin, Mass.
Kearns, Andrew J. (47)
7507 Dickson St., Swissvale, Pa.
Keasling, Stanley W. (47)
1410 Main St., Keokuk, Iowa.
Keating, Frank R. (48)
2132 E. Locust St., Milwaukee 11, Wis.
Keaveny, James W. (45)
323 W. 48th St., Minneapolis, Minn.
KEBLER, LYMAN F. (94)
1322 Park Rd., N.W., Washington, D. C.
Keck, Karl L., Jr. (47)
863 St. Marys Ave., Jonesville, Wis.
Kedersha, James J. (47)
119 Monona Ave., Rutherford, N. J.
Kedersha, Richard George (43)
266 Park Ave., Rutherford, N. J.
Kedzierski, Stanley A. (47)
903 Washington Rd., Kenosha, Wis.
Kee, Horace J. (49)
623 W. 38th St., Norfolk, Va.
Keefe, Jess (45)
Topeka State Hospital, Topeka, Kans.
Keefer, Jacob Thomas (47)
348 Bloom St., Highland Park, Ill.
Keenan, Mary Katherine (40)
St. Mary's Hospital, c/o Pharmacy, Duluth, Minn.
Keene, Bernard M. (18)
202 N. Delaware St., Indianapolis, Ind.
Keener, Harry E. (47)
801 E. Commercial St., Charleston, Mo.

Keeton, Girard L. (47)
667 Ventura Ave., San Mateo, Calif.
Kehr, Floyd (46)
179 W. Washington St., West Chicago, Ill.
Kehr, Henry D. (49)
682 Princeton Ave., Trenton 8, N. J.
Keifer, John S. (48)
3514 S. Broadway, Englewood, Colo.
Keil, Leonard (47)
Box 134, Nashville, Ill.
Keim, Frank Fulmer (46)
733—6th Ave., Helena, Mont.
Keith, Robert E. (47)
Omega, Ga.
Keith, Vincent E. (47)
2123 Pecan St., Texarkana, Ark.
Kelch, Henry C. (47)
1132 Lake Ave., Wilmette, Ill.
Kelder, Gerald D. (49)
6103 N. Navarre Ave., Chicago 31, Ill.
Kelcher, Thomas J. (47)
112 W. Broadway, Council Bluffs, Iowa.
Keleske, Joseph (47)
1600 Center St., Racine, Wis.
Keleti, Guillermo (45)
Urb. S/Antonio, Calle Olimpo, Qta. Marvil, Caracas, Venezuela, S. A.
Kellam, J. A. (49)
520 Reed St., Waycross, Ga.
Kelleher, J. Robert (47)
30 Seaver St., North Easton, Mass.
Keller, Carl Schubert (47)
2731 S. Cleveland, Arlington, Va.
Keller, Charles J. (47)
Jefferson Hospital, c/o Pharmacy Philadelphia 7, Pa.
Keller, Elroy (47)
7001 W. Center St., Wauwatosa 13, Wis.
Keller, Howard R. (48)
1036 Cayuga Dr., Niagara Falls, N. Y.
Keller, Keith K. (38)
Bloomington and Lake St., Minneapolis, Minn.
Keller, Richard G. (46)
44 Whipporwill Way, Mountainside, N. J.
Kelley, Albert H. (49)
Medical Dental Bldg., Seattle 1, Wash.
Kelley, Francis J. (47)
c/o The Kelley Pharmacy, Burlington, Vt.
Kelley, Irving N. (44)
118 Garland St., Bangor, Maine.
Kelley, John F. (47)
510 Maryland Ave., Erie, Pa.
Kelley, Louis S. (49)
1200 Barnum Ave., Stratford Conn.
Kelley, Ray Stanley (25)
14 Bowdoin St., Newton Highlands, Mass.
Kelley, W. Carl (42)
145 E. Mulberry St., Lancaster, Ohio.
Kelly, Charles J. (32)
New Unit of Xavier Univ., Washington and Pine Sts., New Orleans, La.
Kelly, Clark (44)
2311 West St., Pueblo, Colo.
Kelly, Edmond W. (46)
3508 N. Denny, Indianapolis, Ind.
Kelly, Francis Patrick (24)
Main St. & 7th Ave., Carbondale, Pa.
Kelly, G. Benner (36)
230 W. Sierra Vista Dr., Tucson, Ariz.
Kelly, Hunter L. (42)
1618 Delaware Ave., Durham, N. C.
Kelly, John (49)
609 Main St., Cottage Grove, Oreg.
Kelly, John E. (49)
157-159 N. Allen St., Albany 5, N. Y.
Kelly, John E. (49)
252 Genesee St., Utica 2, N. Y.
Kelly, John J. (49)
Colonial Apts., 304, Pittsburgh 21, Pa.
Kelly, Mary T. (47)
19 Commonwealth Ave., Duquesne, Pa.

Kelly, Paul M. (46)
325 S. 12th St., Philadelphia 7, Pa.
Kelso, Ernest C. (49)
1125 S. Garfield, Alhambra, Calif.
Kem, Claude J. (43)
6th & Main, Cottage Grove, Oreg.
Kemner, M. Jane (47)
Owl Creek Rd., Tamaqua, Pa.
Kemper, Abraham (47)
88 Stuyvesant Ave., Newark 6, N. J.
Kemper, James R. (45)
2468 Eastern Ave., Cincinnati 2, Ohio.
Kendall, Harry L. (38)
Kendall Pharmacy, 2012 S. Main St., Santa Ana, Calif.
Kendall, John C. (47) Lansing Pharmacy, Lansing, Kans.
Kendall, Richard W. (47)
819 6th Ave., Brookings, S. Dak.
Kendig, H. Evert (17)
8254 Crittenden St., Chestnut Hill, Philadelphia, Pa.
Keneley, Frank T., Jr. (46)
544 E. Whittier Blvd., Whittier, Calif.
Kenjoski, Vincent (38)
Vince Pharmacy, Osseo, Minn.
Kennedy, Clarence V. (46)
Mitchell, Nebr.
Kennedy, Donald Robert (47)
3355 N. E. 77th, Portland, Oreg.
Kennedy, Dorothy O. (49)
1211 Grand, Everett, Wash.
Kennedy, Eugene J. (47)
2916 E. Ave., N. E., Cedar Rapids, Iowa.
Kennedy, Florence K. (49)
St. Mary's & Vaughan Sts., Winnipeg, Manitoba, Canada.
Kennedy, Gordon W. (45)
966 W. Mendocino, Stockton, Calif.
Kennedy, Janice M. (47)
628 Alvarado St., Redlands, Calif.
Kennedy, M. J. (48)
14 S. Main St., Janesville, Wis.
Kennedy, W. C. (49)
3904 Ruskin, Houston, Tex.
Kennedy, William R. (47)
3944—12th Ave., Sacramento 17, Calif.
Kenner, William H. (48)
3150 Lake Shore Dr., Chicago, Ill.
Kennerly, William D. (47)
Box 1968, Greenville, S. C.
Kenney, George B., Jr. (49)
4008 McCorkle Ave. S. E., Charleston 4, W. Va.
Kenney, Stanley B. (44)
2679 Monroe St., Toledo, Ohio.
Kenney, William J. (43)
714 Lee St., Charleston 1, W. Va.
Kennington, John H. (46)
4925 Winthrop Ave., Indianapolis 5, Ind.
Kent, Albert V. (49)
Spring Ave., Poestenkill, N. Y.
Kent, George W. (48)
18625 Hart St., Reseda, Calif.
Kent, John David (43)
1619 Lincoln Ave., San Jose 10, Calif.
Kent, Mrs. Ray N. (45)
2703 N. 63rd St., Omaha 4, Nebr.
Kenyon, Glenn (46)
Kenyon's Pharmacy, 425 University, Palo Alto, Calif.
Keown, Robert W. (49)
4626 Third Ave. S., St. Petersburg, Fla.
Kepner, Sewell K. (45)
V. A. Hospital Pharmacy North Little Rock, Ark.
Kerbel, Edward (43)
8920 Park Lane S., Woodhaven, N. Y.
Kercher, Edwin H. (47)
4731 Cedar Ave., Philadelphia 43, Pa.
Kerlin, L. B. (49)
536 S. Andrews Ave., Fort Lauderdale, Fla.
Kerlin, Samuel H. (45)
3802 Fairmount Ave., Philadelphia 4, Pa.
Kern, John P. (49)
3259 Karl Rd., Columbus 11, Ohio.
Kern, Joseph H. (49)
128 W. 10th Ave., Columbus, Ohio.
Kern, Max I. (48)
505 Court St., Brooklyn 31, N. Y.
Kerr, Charles Raymond (47)
S. Washington St., Easton, Md.

Kerr, Wendle L. (47)
College of Pharmacy, Iowa City, Iowa.
Kerr, William Robert (32)
c/o Frederick Stearns & Co., Sydney, Australia.
Kershaw, Clarence (47)
1224 Washington St., Wilmington 13, Del.
Kershner, Joseph H. (47)
7 N. Main St., Doylestown, Pa.
Kersten, Donna (47)
Bonduel, Wis.
Keser, Elwood (46)
1735 Loney St., Philadelphia 11, Pa.
Kesling, John H. (47)
151 1/2 Sixth Ave., Montgomery, W. Va.
Kesling, John R. (46)
151 1/2 Sixth Ave., Montgomery, W. Va.
Kessel, Albert G. (47)
Bridge St., Boston, Pa.
Kessel, Yale (49)
2039 Lakeside Dr., Louisville 5, Ky.
Kessler, Everett R. (47)
687 Landis St., Memphis 4, Tenn.
Kessler, Paul (43)
161 McKinley Ave., East Orange, N. J.
Kestenbaum, Harold (48)
30 Chancellor Ave., Newark 8, N. J.
Ketcham, Basil P. (47)
c/o Pharmacy, Jefferson Med. Coll. Hospital, 10th & Samsom Sts., Philadelphia 7, Pa.
Ketter, Edward Oscar (47)
809 W. Abert Pl., Milwaukee 6, Wis.
Kettering, Mabel L. (47)
6207 Drexel Ave., Chicago 37, Ill.
Keutzer, Walter S. (44)
c/o Mallinckrodt Chemical Works, 3600 N. 2nd St., St. Louis, Mo.
Kevorkian, Warren M. (48)
3630 W. Third St., Los Angeles 5, Calif.
Keyes, Ralph E. (45)
349 Auburn St., Auburndale, Mass.
Keys, James Donald, Jr. (47)
1505 M. St., La Grande, Oreg.
Keys, Victor L. (39)
30 E. Broad St., Columbus 15, Ohio.
Keyser, F. W. (30)
c/o Nelson Baker Co., 1301-31 W. Lafayette Blvd., Detroit 26, Mich.
Khambadkone, Keshav S. (48)
c/o The Popular Pharmacy Dispencing Chemist, Dadar, Bombay, India.
Khlentzos, Michael T. (48)
11 Middlefield Dr., San Francisco 16, Calif.
Kidder, James H. (47)
155 E. 62nd St., New York 21, N. Y.
Kidder, Monroe C. (45)
257 S. Spring St., Los Angeles 12, Calif.
Kiefer, Gerald L. (37)
Cor. Main & Broad Sts., Tonawanda, N. Y.
Kiehler, Lambert G. (47)
18018 James Couzens Hwy., Detroit 21, Mich.
Kiehm, Louis P. (47)
5701 N. Shoreland Ave., Milwaukee 11, Wis.
Kiene, James R. (47)
2961 N. 37th, Kansas City, Kans.
Kienth, Arthur E. (47)
2505 E. Park Pl., Milwaukee 11, Wis.
Kienzle, Fred B. (49)
919 Front St., Sacramento, Calif.
Kierstein, Martin (48)
26 Governuer St., New York 2, N. Y.
Kierszmowski, Stephen (46)
105 Burstone Rd., New Hartford, N. Y.
Kiester, John H. (44)
242 Vermont Ave., Clarksburg, W. Va.
Kievitt, Joseph E. (47)
80 Union Blvd., Wallington, N. J.
Kihara, Mrs. Cisco (49)
204 Pioneer Bldg., Pocatello, Idaho.
Kilkelly, Edward J. (46)
7317—Fifth Ave., Kenosha, Wis.

Killeen, Edmond T. (48)
815 W. 78th St., Auburn Apts. 305 Chicago, Ill.
Kimes, Earl A. (46)
8323 Childs Rd., Wyndmoor, Montg. Co., Pa.
Kimmel, Everett R. (45)
Gamboa Dispensary, Gamboa, Canal Zone.
Kimmel, J. C. (44)
Mill City, Oreg.
Kimmel, Oscar F. (37)
262 St. Nicholas Ave., Brooklyn, N. Y.
Kimmelman, Harry (49)
P. O. Box 278, Miami Beach, Fla.
Kimsey, James C. (45)
P. O. Box 507, Toccoa, Ga.
Kimura, T. Eugene (46)
Pyridium Corp., Nepera Park, Yonkers 2, N. Y.
Kincaid, Dwane L. (48)
2110 S. Utica, Tulsa, Okla.
Kincaid, Jess Lee (46)
5190 W. Colfax Ave., Denver 4, Colo.
King, Benjamin F. (48)
1657—12th St., Hickory, N. C.
KING, BERNARD H. (47)
4140 Winthrop St., Indianapolis 5, Ind.
King, Burton (49)
Marysville, Kans.
King, C. E. (45)
c/o King Drug Co., 2001 Highland Ave., Birmingham, Ala.
King, Charles W. (30)
117 Main St., Chicopee Falls, Mass.
King, Dean G. (47)
806 E. 33rd, Kansas City, Mo.
King, Earl L. (47)
415 N.W. 9th, Pendleton, Oreg.
King, Edward A. H. (33)
305 E. 45th St., New York, N. Y.
King, Elmer J. (44)
610 Locust St., Des Moines 9, Iowa.
King, Eugene C. (49)
103 W. Amhurst, Louisville, Ky.
King, F. T. (47)
Dunsmuir, Calif.
KING, GEORGE ALEXANDER NEWTON (92)
2725 S. France Ave., Minneapolis, Minn.
King, Gilbert (41)
836 Market St., Chattanooga, Tenn.
King, Jean Yun-hua (49)
School of Pharmacy, Purdue University, Lafayette, Ind.
King, Joseph Gilbert (47)
836 Market St., Chattanooga 2, Tenn.
King, Marion M. (47)
700 Kansas Ave., Rm. 204-6, Topeka, Kans.
King, N. L. (47)
Main St., Rural Valley, Pa.
King, Robert E. (43)
605 Tenth Ave., Prospect Park, Pa.
King, Standish B. (49)
370 Grove St., Chicopee Falls, Mass.
King, Thomas B. (49)
4936 Vine St., St. Bernard 17, Ohio.
King, Thomas Myles, Jr. (47)
c/o Magee's Drug Store, Quanah, Tex.
King, Valdane J. (49)
624 Charlotte Ave., Rock Hill, S. C.
King, William C. (48)
150 E. Sixth St., Beaumont, Calif.
King, William J. (47)
456 W. Heyburn, Twin Falls, Idaho.
Kingery, Charles F. (47)
2914 Montrose Ave., Richmond, Va.
Kingwell, Benjamin J. (46)
698 E. Colorado St., Pasadena, Calif.
Kinman, Gene (45)
1656 Georgetown Rd., Indianapolis, Ind.
Kinman, William T. (47)
108 W. Lime, Monrovia, Calif.
Kinne, Ray E. (45)
970 Great Plain Ave., Needham, Mass.
Kinner, Harold C. (40)
5905 Riggs Rd., Hyattsville, Md.
Kinney, Patrick B. (47)
102 Koehne St., Indianapolis 8, Ind.

Kinross, Ralph B. (48)
Cincinnati College of Pharmacy, 423 W. 8th St., Cincinnati 3, Ohio.
Kinsey, Herbert S. (47)
1 N. Sandusky St., Delaware, Ohio.
KINSEY, RAYMOND DANIEL (26)
1324 Taylor St., N.E., Washington, D. C.
Kinsley, Dale L. (41)
Box 761, La Grange, Ga.
Kinsman, A. J. (40)
511–19 E. 72nd St., New York, N. Y.
Kirby, James H., Jr. (48)
3315 Pinewood Ave., West Palm Beach, Fla.
Kirby, Thomas W., Jr. (47)
104 S. State, Jerseyville, Ill.
Kirch, Ernst R. P. (29)
1333 Thorndale Ave., Chicago 40, Ill.
Kirchmeyer, Fred J. (46)
1613 North Ave., Waukegan, Ill.
Kirchner, Kitty B. (42)
3910 Sunset Dr., Los Angeles 27, Calif.
Kirk, Armen T. (37)
Boston City Hospital, Boston 18, Mass.
Kirk, Catharine E. (47)
Rising Sun, Md.
Kirk, Michael (46)
184 Rowland Ave., Clifton, N. J.
Kirkland, Jack C. (40)
1130 Erskine St., S. W., Atlanta, Ga.
Kirkpatrick, Thomas M., Jr. (48)
210 Highland Dr., Leaksville, N. C.
Kirman, Norman (47)
2455 Sturtevant, Detroit 6, Mich.
Kirsch, Nathan Carl (43)
223 Prospect St., Apt. 1-B, Bldg. 4, East Orange, N. J.
Kirsh, Morris (47)
5214 S. Woodlawn, Chicago 15, Ill.
Kirson, Abraham (48)
1101 St. George Ave., Roselle, N. J.
Kirstein, Albert F., Jr. (47)
74 E. Cherry St., Rahway, N. J.
Kishkis, Michael J. (47)
4 Dickinson St., Cambridge, Mass.
Kisner, Talmage W. (49)
125 E. Main St., Carmi, Ill.
Kiss, Max (44)
423 Atlantic Ave., Brooklyn 17, N. Y.
Kist, William (43)
141 Mineola Blvd., Mineola, N. Y.
Kistler, Mary M. (48)
356 Center St., Bloomsburg, Pa.
Kiszonas, Estelle (42)
1809 Prospect Ridge Blvd., Haddon Heights, N. J.
Kitabayashi, Sam (45)
Hassler Health Home, Redwood City, Calif.
Kitano, Julia (47)
U. S. Marine Hospital, Seattle, Wash.
Kitchen, George L. (46)
462 Wellington St. W., Toronto, Ont., Canada.
Kitsuse, Nelson Y. (47)
4449 N. Clifton Ave., Chicago 40, Ill.
Kittinger, O. T. (47)
Rocky Mount, Va.
Kitts, Ethel W. (48)
c/o The T. Eaton Co., Ltd., Pharmacy, Victoria, B. C., Canada.
Kitzinger, John H. (46)
7525 W. Becher St., West Allis 14, Wis.
Klan, Zdenek F. (47)
Benatska 2, Praha, Czechoslovakia.
Klatt, G. A. (49)
1308 Casa Vista Dr., Pomona, Calif.
Klausman, M. Elizabeth (46)
San Jacinto Memorial Hospital, P. O. Box 209, Baytown, Tex.
Klawitter, Harold J. (49)
2778 Minot, Cincinnati 9, Ohio.
Klayman, Harry (46)
5 Sherman Ave., New York 34, N. Y.
Klebanoff, David (47)
201 City Line, Merion, Pa.
Kleber, John W. (49)
1103 Irwin St., Aliquippa, Pa.
Kleckner, Thaddeus B. (45)
182 Winchester Ave., New Haven 7, Conn.
Klein, E. O. (36)
Box 165, Farmington, Mo.
KLEIN, EDWARD NICHOLAS EMIL (05)
3511—162nd St., Flushing, N. Y.
Klein, Franz (42)
784 High St., Newark, N. J.
Klein, Harold B. (47)
7812—35th Ave., Jackson Heights, N. Y.
Klein, Harold J. (47)
655 Clinton Ave., Bridgeport 5, Conn.
Klein, J. S. (41)
Montville, N. J.
Klein, Jacob (48)
1265 Gerard Ave., New York 52, N. Y.
Klein, John C. (47)
Richardton, N. Dak.
Klein, Lawrence (46)
128 Manhattan Ave., Brooklyn 6, N. Y.
Klein, Meyer (37)
826 S. Wabash, Chicago, Ill.
Kleinbart, Dave (49)
801 Washington Ave., Miami Beach 39, Fla.
Kleinburd, Samuel (48)
622 W. Huntingdon St., Philadelphia 33, Pa.
Kleiner, Nickolas C. (49)
4328 W. 57th Ave., Cleveland 9, Ohio.
Kleinfield, Eugene L. (48)
701 Pine St., Camden, N. J.
Kleinkopf, Leo (49)
1403 Punahou St., Honolulu 33, Hawaii.
Kleinpeter, Raymond A. (48)
2026 W. 68th St., Los Angeles 44, Calif.
Kleinsinger, Harold (40)
2501 Davidson Ave., Bronx, N. Y.
Klemme, Carl J. (38)
12 S. Harvey, Ferguson, Mo.
Klemme, Leonard C. (45)
149 Clara Pl., Elmhurst, Ill.
Klempner, Samuel (39)
276 Albany Ave., Brooklyn, N. Y.
Klendshoj, Niels C. (43)
The Arner Co., Buffalo 3, N. Y.
Klepfish, Milton A. (44)
2735 Gwynns Falls Pkwy., Baltimore 16, Md.
Kletter, Edward (48)
5000 District Blvd., Los Angeles 11, Calif.
Kleven, Azor J. N. (47)
Bldg. 375 C, Fort Snelling, St. Paul 11, Minn.
Klick, Forrest M. (35)
408 Jackson Ave., St. Charles, Ill.
Klier, George A. (48)
692 Maple St., Rochester 11, N. Y.
KLINE, CLARENCE MAHLON (02)
1530 Spring Garden St., Philadelphia 1, Pa.
Kline, Edgar L. (48)
201 S. 14th, Allentown, Pa.
Kline, Jack D. (44)
432 Schuylkill Ave., Reading, Pa.
Klingele, Conrad Philip (46)
Harlem Valley State Hosp., Wingdale, N. Y.
KLINGMANN, ALBERT (10)
3861 Cannon Pl., New York, N. Y.
Klipp, John F. (22)
825 Franklin St., Garden City, N. Y.
Kloeckner, Louis (45)
2301 Pestalozzi St., St. Louis 18, Mo.
Klonoff, Jerry (48)
2122 N. E. 12th Ave., Portland 12, Oreg.
Klonoski, Edmund J. (45)
1305 Pittston Ave., Scranton, Pa.
Klopp, Marlen J. (49)
Poplar St., Richland, Pa.
Klotz, L. J. (31)
3307 S. Sterling Way, Cincinnati 9, Ohio.
Klotzman, Robert H. (42)
Hq. Air Rescue Service, Washington 25, D. C.
Klugman, Julius M. (46)
32 E. Ridgewood Ave., Ridgewood, N. J.
Klugman, Leo (46)
U. S. Quarantine Station, Box 3788, San Juan, P. R.
Klugmann, Alfred (47)
1289 Commonwealth Ave., Allston 34, Mass.
Klumb, George H. (45)
1863 Kiest Ave., Northbrook, Ill.
Klumpp, Theodore G. (44)
170 Varick St., New York, N. Y.
Knapp, William G., Jr. (46)
c/o Sharp & Dohme, Inc., Export Div., P. O. Box 7259, Philadelphia 1, Pa.
Knauer, Harley L. (48)
69–40 Yellowstone Blvd., Forest Hills, N. Y.
Knecht, Henry L. (49)
418 Canal Ave., Plaquemine, La.
Knecht, Nancy J. (49)
8 Colonial Terrace, Maplewood, N. J.
Kneifel, Thomas A. (46)
Box 275, Salem, Ohio.
Knepper, F. C. (48)
Green & Water Sts., Cumberland, Md.
Knight, A. Ernest (47)
117 Cherry St., Jesup, Ga.
Knight, Alexander G. (49)
2282 Sturtevant Ave., Detroit 6, Mich.
KNIGHT, JOE (34)
Lebanon, Mo.
Knight, Joseph (49)
10 Monroe, Passaic, N. J.
Knight, Philbrook H. (49)
U. S. Quarantine Station, Staten Island 5, N. Y.
Knight, R. Lee (47)
Prairie City, Oreg.
Knight, William O. (36)
743 East 104th Pl., Chicago 28, Ill.
Knobel, Albert C. (46)
R. R. 2, Milford, Ind.
Knoblock, Fred E. (47)
4023 N. 26th St., Milwaukee 9, Wis.
Knoller, George J. (47)
1950 N. Bartlett Ave., Milwaukee 2, Wis.
Knott, Joseph (47)
95 Main St., Mineola, N. Y.
Knowles, Thomas R. (43)
136 Davison Ave., W., Highland Park 3, Mich.
Knowlton, Naomi (45)
1503 Fruitvale Ave., Oakland, Calif.
Knowlton, R. R. (44)
1206 Fourth Ave., Huntington, W. Va.
Knueppel, Hilbert H. (46)
3435 W. Clybourn St., Milwaukee 8, Wis.
Kocab, Regis A. (47)
1237 Iten St., Pittsburgh 12, Pa.
Koch, James H. (49)
4935 Delmar Blvd., St. Louis 8, Mo.
KOCH, JULIUS ARNOLD (92)
921 E. Laurel St., Ocala, Fla.
Koch, William J. (46)
3404 N. Port Washington Ave., Milwaukee 12, Wis.
Kochanowicz, John Edward (47)
3553 Bethoven St., Pittsburgh 13, Pa.
Kochek, William A. (47)
55 Washington Ave., Carteret, N. J.
Koczyk, Henry R. (48)
9128 Georgia Ave., Silver Spring, Md.
Koehler, Ferederick W. (47)
121 N. Linton, Blue Earth, Minn.
Koelz, Albert A. (47)
3694 Douglass Ave., Memphis 11, Tenn.
Koenig, Roger L. (46)
1302 S. Minnesota Ave., Sioux Falls, S. Dak.
Koepke, Walter A. (26)
5034 W. Galena St., Milwaukee 8, Wis.
Koerner, Marvin John (46)
1541 Highland Ave., Eau Claire, Wis.
Koester, Fred W. (47)
1125 Harvard St., Santa Monica, Calif.
Koffskey, Louis Elwood (40)
840 Louisa St., New Orleans 17, La.
Kohan, Nathan H. (47)
Rodriguez General Hospital, A.P.O. 851, c/o Postmaster, Miami, Fla.
Kohan, Samuel (44)
1364 St. Paul St., Denver 6, Colo.
Kohl, J. Otto (43)
McMicken Ave. & Mohawk Pl., Cincinnati, Ohio.

Kohl, Philip L. (45)
2911 Monroe, Kansas City 3, Mo.
Kohl, William P. (47)
620 Clay Ave., Jeannette, Pa.
Kohler, Frederick William (46)
25 E. Pikes Peak Ave., Colorado Springs, Colo.
Kohler, Howard E. (47)
St. Barnabas Hospital for Chronic Diseases, 183rd St. & 3rd Ave., Bronx 57, N. Y.
Kohn, Leonard N. (46)
320 Walnut St., Mount Shasta, Calif.
Kohn, Sidney L. (49)
1375 Downing St., N. E., Washington 18, D. C.
Kohnke, William A. (48)
973 E. 7th St., St. Paul, Minn.
Koich, James M. (41)
5953 Chalmers Ave., Detroit 13, Mich.
Koike, Koichi J. (49)
714 Bryan Ave., Salt Lake City, Utah.
Kok, J. F. (47)
Zuidwal 60, The Hague, Holland.
Kokes, R. T. (49)
P. O. Box 218, Coachella, Calif.
Kolar, Gustav S. (18)
500 S. Throop, Chicago 7, Ill.
Kolbe, William G. (48)
20819 Watson Rd., Cleveland, Ohio.
Kollen, Arthur S. (48)
2 East Parkway, Scarsdale, N. Y.
Koller, Alfred R. (48)
1207 N. Jackson St., Roseburg, Oreg.
Koller, Irma H. (47)
752 Onderdonk Ave., Brooklyn 27, N. Y.
Koller, John Frank (47)
1547 S. Oak Park Ave., Berwyn, Ill.
Kollmer, William H. (47)
Cutchogue, N. Y.
Kulupa, Ladislaus A. (47)
1115 W. Jefferson Blvd., South Bend 19, Ind.
Komadina, Daisy (45)
2283 Dresden, Columbus, Ohio.
Kondzella, Michael (47)
1312 Prairie St., Beloit, Wis.
Konecny, Alphonse (45)
544 Riverside Dr., Johnson City, N. Y.
Konizer, A. George (47)
801 W. 2nd St., Wilmington 15, Del.
Konwiser, A. Lincoln (44)
c/o C. F. Kirk Co., 521-523 W. 23rd St., New York 11, N. Y.
Konzen, Don J. (47)
4128 Belmar, Toledo 12, Ohio.
Koontz, Nate P. (46)
1315 Stratford Rd., Topeka, Kans.
Koors, James A. (46)
526 E. Merrill St., Indianapolis 3, Ind.
Kopecky, Charles (48)
2323 S. Austin Blvd., Cicero 50, Ill.
Kopel, Simon (48)
204 W. Francis St., Ontario, Calif.
Koplin, Ida (47)
1838 El Cerrito Pl., Hollywood 28, Calif.
Kopta, William F. (47)
1641 S. 62nd Ave., Cicero 50, Ill.
Koren, Joseph A. (47)
2359 S. 4th Ave., North Riverside, Ill.
Koresmar, Urban J. (49)
Crile Hospital, Cleveland, Ohio.
Korn, Bernard (40)
105-03—225th St., Queens Village, N. Y.
Korner, John (47)
319 Columbia Ave., Pittman, N. J.
Kornfield, Sanford (45)
3105 Webster St., Oakland 11, Calif.
Koronkiewicz, Frank S. (46)
186 S. Market, Nanticoke, Pa.
Korr, Irving (46)
2430—8th Ave., Oakland 6, Calif.
Kortz, Louise (38)
605—10th Ave., S. E., Rochester, Minn.
Koshetz, Bernard (43)
121 Van Cortlandt Ave., W., New York 63, N. Y.
Kosierowski, Stanley A. (48)
95 N. First St., Brooklyn 11, N. Y.
Koss, E. Flavelle (38)
3712 Harrison St., N. W., Washington, D. C.
Kostell, Gustav Charles (48)
c/o Turner Drug Store, 435 E. Main St., Alliance, Ohio.
Kostyk, Stephen M. (49)
6495 Westminster Dr., Parma 9 Ohio.
Kosviner, Akiba Hirsch (44)
Hadassah Med. Org., P. O. Box 499, Jerusalem, Israel
Kotler, Daniel (47)
2429 E. 17th St., Brooklyn 29, N. Y.
Kovacheff, Christ (40)
3452—182nd St., Lansing, Ill.
Kovacs, Samuel S. (37)
809 W. 58th St., Chicago, Ill.
Kovacs, Walter (47)
1010 Rahway Ave., Avenel, N. J.
Kowalewski, Joseph F. (49)
Cincinnati College of Pharmacy, 423 W. Eighth St., Cincinnati 3, Ohio.
Kowalewski, Vincent J., Jr. (44)
Brandywine Pharmacy, 14th and King Sts. Wilmington, Del.
Kowalski, Eugene H. (47)
100 Roesch Ave., Buffalo 7, N. Y.
Kowalski, Henry B. (47)
1602 W. National Ave., Milwaukee 4, Wis.
Kowalski, J. J. (28)
Red X. Pharmacy, 624 Commercial St., Emporia, Kans.
Koyama, Fred Y. (49)
1121 S. Hobart Blvd., Los Angeles 6, Calif.
Kozek, Nathan (49)
4733 Lankershim Blvd., North Hollywood, Calif.
Kozinski, Victor (46)
46 Taylor St., Trenton, N. J.
Kracoff, Doris (46)
2001 N. 33rd St., Philadelphia 21, Pa.
Kraemer, William (42)
2514 Wilcox St., Chicago, Ill.
Kramer, Abraham H. (47)
69-10 Yellowstone Blvd., Apt. 109, Forest Hills, N. Y.
Kramer, Edwin L. (47)
17326 Walden Ave., Cleveland 20, Ohio.
Kramer, Harry R. (47)
909 Washington Ave., Santa Monica, Calif.
Kramer, Herman (47)
785 Broadway, West Somerville 44, Mass.
Kramer, James (49)
7244 Frankford Ave., Philadelphia 35, Pa.
Kramer, John E. (32)
129 Overhill Rd., Cynwyd, Pa.
Kramer, Joseph (48)
11 Hatherly Rd., Brighton 35, Mass.
Kramer, R. A. (36)
Evans Chemetics, Inc., 250 E. 43rd St., New York, N. Y.
Krane, Sara (46)
c/o Illinois Central Hosp., 5800 Stony Island Ave., Chicago 37, Ill.
Krantz, John Christian, Jr. (20)
Ellenham Rd., Ruxton 4, Md.
Krasnoff, Edward L. (48)
197-40 G. Peck Ave., Flushing, N. Y.
Kraus, Alexander (46)
1473 Bedford Ave., Brooklyn 16, N. Y.
Kraus, E. H. (24)
2083 Natural Science Bldg., Univ. of Michigan, Ann Arbor, Mich.
Kraus, Edward H. (47)
1134 W. University, Springfield, Mo.
Kraus, Emma Myrtle (45)
Charlotte Memorial Hosp., Charlotte, N. C.
Krause, Arthur J. (45)
58 Scott St., Oshkosh, Wis.
Krause, Elmer A. (47)
3921 N. Main, Houston, Tex.
Krause, George M. (46)
321 Walnut St., Roselle, N. J.
Krauss, Helen F. (47)
3969 Mt. View, San Bernardino, Calif.
Kravet, Samuel J. (47)
760 S. Orange Ave., Newark 6, N. J.
Kravetz, Bessie C. (48)
1426 S. Genesee Ave., Los Angeles 35, Calif.
Kravitz, Arnold (49)
4324 W. 16th St., Chicago 23, Ill.
Kravitz, Herbert (48)
1971 Georgian Rd., Philadelphia 38, Pa.
Krayer, Karl A. (47)
214 W. Colorado, Dallas, Tex.
Kregel, W. C. (25)
481 Rice St., St. Paul, Minn.
Kreimer, Eldon R. (47)
1513 Broadway, Scottsbluff, Nebr.
Kreiser, F. A. (47)
218 W. 25th St., Sioux Falls, S. Dak.
Kreitman, Arthur D. (49)
1859 Douglas Blvd., Louisville 5, Ky.
Kreizinger, Karl (42)
1610 Santa Barbara St., San Diego 7, Calif.
Kreizinger, Raymond F. (48)
Malloy's B. Pharmacy, 428 Thorn St., San Diego, Calif.
KREMENS, ABRAHAM I. (28)
7361 N. Sheridan Rd., Apt. 3-C, Chicago 26, Ill.
KREMERS, ROLAND EDWARD (20)
Central Labs., General Foods Corp. 1125 Hudson St., Hoboken, N. J.
Kressaty, Fred (47)
20 Haskell Ave., Haskell, N. J.
Kreutzberg, Robert C. (45)
29716 Bruce Dr., Willoughby, Ohio.
Kriegel, Norbert (46)
580 W. 161st St., New York 32, N. Y.
Krieger, William H. (48)
Vigo Barracks, So. Plant, R. R. 2, Terre Haute, Ind.
Krieghoff, Floyd William (47)
3380 Monroe St., Toledo 6, Ohio.
Krigstein, David J. (47)
3203 Madison St., Wilmington, Del.
Kriner, Edward Casmir (46)
1917 Hoyt Ave., Indianapolis, Ind.
Kritzer, Everett L. (49)
229 E. Main, Albemarle, N. C.
Kriz, Howard W. (49)
P. O. Box A, Madras, Oreg.
Krna, Rudolph S. (45)
73 Rotary Ave., Binghamton, N. Y.
Krohn, Joseph (49)
1115 Lincoln Ave., San Jose, Calif.
Krohn, Ruben G. (41)
7226 W. North Ave., Wauwatosa 13, Wis.
Kromraj, Henry S. (47)
709 N. Meadow Lane, Madison 5, Wis.
Kroning, Hubert T. (43)
Sandstone, Minn.
Krontz, Dorothy B. (49)
1010 W. 23rd Lorain, Ohio.
Kropp, William H. (42)
2200 N. 3rd St., Milwaukee 12, Wis.
Kruckeberg, Henry C. (47)
2630 E. 25th St., Minneapolis 6, Minn.
Krueger, Fred W. (47)
1000 S. Calhoun St., Fort Wayne, Ind.
Kruger, A. (36)
375 Osborne Ter., Newark, N. J.
Krummenacher, Ralph K. (47)
7472 Maple Ave., Maplewood 17, Mo.
Krumwiede, Howard Andrew (19)
c/o E. R. Squibb & Sons, Georges Road, New Brunswick, N. J.
Krupinski, Helen M. (45)
379 Hayes St., Gary, Ind.
Krupkin, M. A. (22)
1521 Fullerton Ave., Chicago, Ill.
Krupski, Edward (48)
11732 Roosevelt Way, Seattle 55, Wash.
Kruzshak, Steven J. (46)
610 Riverside Dr., Fairfield, Conn.
Krygier, Andrew A. (47)
803 E. State St., Milwaukee 2, Wis.
Krygier, Mary Ann (47)
803 E. State St., Milwaukee 2, Wis.
Krysztafkiewicz, Edmund S. (44)
1092 Sycamore St., Buffalo, N. Y.
Ksendzik, Nina (48)
13222 Caldwell, Detroit 12, Mich.
Kubat, Amil (42)
3362 S. 13th St., Omaha, Nebr.
Kubiak, Patricia L. (49)
130 Judson Rd., La Porte, Ind.
Kubricht, Theophilus J. (47)
1903 St. Thomas St., Apt. N, New Orleans, La.

Kuchera, Joseph (47)
117 Church St., Old Forge, Pa.
Kuck, Marie B. (49)
11727 Saticoy, North Hollywood, Calif.
Kuenzi, Ernest G. (45)
State of Wis. Gen. Hospital, Madison, Wis.
Kuenzig, Cecilia Mary (45)
2727 Custer Ave., Pittsburgh, Pa.
Kuenzig, Emma (47)
2727 Custer Ave., Pittsburgh 27, Pa.
Kuester, Hugo L. (45)
Box 626, Fort Bayard, N. Mex.
KUEVER, R. A. (12)
Univ. of Iowa, Iowa City, Iowa.
Kuhlmann, Edwin G. (43)
3236—10th Ave. S., Minneapolis, Minn.
Kuhn, Carl B. (47)
3106 Overlook Dr., Nashville 5, Tenn.
Kuhn, John W., Jr. (46)
2nd & Walnut Sts., Green Lane, Pa.
Kuhn, Thomas M. (47)
4101 E. 34th St., Indianapolis 18, Ind.
Kuhnle, Hans A. (43)
1908 W. Touhy Ave., Chicago 26, Ill.
Kuhns, Doris V. (49)
427 Jefferson St., East Greenville, Pa.
Kulaja, Mary (46)
7850 E. Jefferson Ave., Detroit, Mich.
Kull, Raymond C. (46)
2805—26th St., N. E., Washington 18, D. C.
Kumakura, Haruo (49)
Veterans Administration Center, Pharmacy, Wood, Wis.
Kumkumian, Charles S. (43)
6015 Chestnut St., Philadelphia 39, Pa.
Kumler, Warren Donald (44)
College of Pharmacy, Univ. of California, San Francisco, Calif.
Kuna, Samuel (49)
57 Russell Ave., Rahway, N. J.
Kung, Philip K. (48)
1312½ S. Bonnie Brae, Los Angeles 6, Calif.
Kunka, Henry E. (47)
2701 W. Cermak Rd., Chicago 8, Ill.
Kunka, Robert V. (46)
2899 Archer Ave., Chicago 8, Ill.
Kunkel, Paul J. (39)
1806 E. Main St., Waterbury, Conn.
Kuntz, Arthur C. (45)
510 Clinton St., Defiance, Ohio.
Kunz, Irving B. (47)
501 Wilmington at Virginia, St. Louis, Mo.
Kunze, R. H. (47)
961 W. Seventh St., St. Paul, Minn.
Kupsch, Arno W. (47)
6029 S. Harper Ave., Chicago 37, Ill.
Kurica, George M. (49)
727 Charles St., Perth Amboy, N. J.
Kurihara, Kenichi (49)
544 Riverdale, Glendale 4, Calif.
Kurka, Joseph F. (43)
2007½—3rd Ave., Los Angeles 16, Calif.
Kurosu, Gilbert K. (46)
3940 Waialae Ave., Honolulu, T. H.
Kurschner, Clayton J. (49)
Apt. 18-B, Badger, Wis.
Kurschner, Pershing C. (48)
222 W. Pine St., Washburn, Wis.
Kursvietis, Anthony J. (47)
1028 E. 36th St., Baltimore 18, Md.
Kurtz, Adrienne B. (46)
58 Pulaski St., Brooklyn 6, N. Y.
Kurtz, John R. (46)
654 Penn Ave., Sinking Spring, Pa.
Kurtz, Julius (46)
58 Pulaski St., Brooklyn, N. Y.
Kurtzman, Milton (46)
15 Myrtle Ave., Passaic, N. J.
Kurz, Frank R. (47)
8036 Harper, Detroit 13, Mich.
Kushner, Leo A. (46)
807 W. Chestnut, Yakima, Wash.
Kuskin, Irving I. (47)
924 Bendermere Ave., Asbury Park, N. J.
Kuskowski, Frank (41)
1133 W. Lincoln Ave., Milwaukee 7, Wis.
Kutler, Nathan (47)
3162 Sycamore Rd., Cleveland Heights 18, Ohio.
Kutza, L. G. (42)
1302 Broadway, Lorain, Ohio.
Kwako, Fred John (47)
Pelican Rapids, Minn.
Kyle, Clarence (47)
1017 Freeman Ave., Cincinnati 3, Ohio.
Kyle, Ernest (47)
6025 Platte Ave., Lincoln 7, Nebr.
Kyser, Arthur C. (47)
158 S. Jeffers, Mobile, Ala.
Kyzr, Anton L. (48)
162-15 Cross Island Parkway, Beechhurst, L. I., N. Y.

# L

LaBarbera, Frank J., Jr. (47)
160 E. 89th St., New York 28, N. Y.
Laber, Don (41)
2518 N. Stowell Ave., Milwaukee 11, Wis.
Laberge, Charles E. (49)
12 S. River St., Swanton, Vt.
Laborde, Francisco E. (47)
255 Manuel F. Rossi St., Reparto Baldrich, Hato Rey, P. R.
Labow, Issie (46)
4160 St. Lawrence Blvd., Montreal, Que., Canada.
Labow, William R. (48)
5351 Cote St. Luc Rd., Montreal 28, Que., Canada.
Labowitz, David B. (47)
3939 Butler St., Pittsburgh 1, Pa.
LaBranche, Emile J., Jr. (47)
3229 Allen St., New Orleans, La.
LaCasse, Rene Joseph (46)
1115 Harris Ave., South Bellingham 25, Wash.
Lacefield, Richard S. (49)
c/o Weir Drug Store, Owensboro, Ky.
Lach, Bruce F. (49)
169 Third St., Elizabeth 1, N. J.
Lach, Frederick C. (49)
638 S. Irena Ave., Redondo Beach, Calif.
Lacher, J. A. (43)
2030 Highland Pkwy., St. Paul 5, Minn.
Lachman, Abraham (44)
102 Pine Ridge Rd., Media, Pa.
Lachman, Herman (49)
4675 W. Flagler St., Miami, Fla.
Lackey, M. A. (44)
507 N. Main St., High Point, N. C.
La Course, A. (33)
Burrough Bros. Mfg. Co., 123 Market Pl., Baltimore, Md.
Lafferty, Alice M. (48)
133 N. Catalina St., Los Angeles 4, Calif.
Laflin, Lynn A. (46)
401 Hammond St., Red Oak, Iowa.
LaFrance, Joan R. (48)
149 High St., Somersworth, N. H.
Lager, Roger K. (39)
R. D. 1, East Greenbush, N. Y.
Lagroue, Lula Sledge (47)
823 Broadway, New Orleans, La.
Lahiri, J. K. (36)
6/4 Swinhoe St., Ballygunge, Calcutta, West Bengal, India.
Lake, Kenneth E. (49)
156 S. Washington, Constantine, Mich.
Lakey, Lester L. (49)
Alpine Drug Company, Golden, Colo.
LAKEY, ROLAND T. (20)
College of Pharmacy, Wayne University, 4841 Cass Ave., Detroit Mich.
Lallone, Leopold (47)
301 S. 6th St., Newark 3, N. J.
La Malfa, Carmelo J. (47)
3261 N. 7th St., Milwaukee 6, Wis.
Laman, Robert F. (47)
607 Owen St., Aliquippa, Pa.
Lambert, Bernard E. (46)
1320 Kentucky St., Lawrence, Kans.
Lambert, George Roy (41)
301 Willow St., Detroit Lakes, Minn.
Lambert, Robert S. (47)
406 S. Pearl, Ellensburg, Wash.
Lamendola, Anthony L. (44)
Gonzales, La.
LaMond, Merry (49)
3109—38th St., Des Moines, Iowa.
Lamoreaux, J. Boyd (46)
3601 S. Division, Grand Rapids 8, Mich.
Lamp, Clarence O. (47)
Route 3, Box 3, Manning, Iowa.
Lancaster, Mary (47)
Steppville, Ala.
Lance, Harold L. (48)
Rt. 4, Box 597, Milwaukie 2, Oreg.
Landau, Louis (37)
3245 Waverly, Detroit 6, Mich.
Landeen, Hazel (39)
545 S. Sixth St., Pocatello, Idaho.
Landers, Guy E. (47)
215 Dixie Ave., Cartersville, Ga.
Landers, Samuel (45)
74 Hamlin Rd., Buffalo 8, N. Y.
Landes, Hugh C. (48)
Rm. 220, 209 Post., San Francisco 8, Calif.
Landini, Andrew (25)
Foster St., Littleton, Mass.
Landis, Henry W. (46)
210 Market St., Auburn, Pa.
Lando, Reuben B. (47)
1504 Denniston St., Pittsburgh 17, Pa.
Landwehr, Albert W. (41)
3442 N. Newhall St., Milwaukee 11, Wis.
Landy, Herman (49)
3720 Parkview, Pittsburgh, Pa.
Lane, Donald M. (47)
Newburg, Mo.
Lane, Frank A. (46)
999 S. Broadway, Denver 17, Colo.
Lane, Jean E. (47)
Box 294, Newburg, Mo.
Lane, Mary (49)
Jefferson Hospital Pharmacy, Philadelphia 7, Pa.
Lane, Robert L. (47)
Bainbridge, Ga.
Lane, William T. (48)
805 Hendrickson St., Clinton, Tenn.
Lang, August A. (46)
628 N. Third Ave., Wausau, Wis.
Lang, Emil O. (48)
Dittingerstrasse 31, Basel, Switzerland.
Lang, Harold (49)
891 Nostrand Ave., Brooklyn 25, N. Y.
Lang, Margie A. (45)
1313 Anne St., Ann Arbor, Mich.
Lang, Walter J. (47)
246 Bowdoin St., Dorchester, Mass.
Langberg, Harold (42)
5800 W. Fort St., Detroit 9, Mich.
Lange, Edward W. (47)
c/o Eli Lilly Co., 324 E. Wisconsin, Milwaukee 2, Wis.
Lange, John (47)
141 W. Seeboth, Milwaukee 4, Wis.
Lange, William M. (49)
57 Dove St., Albany 6, N. Y.
Langefels, Leo F. (45)
1114 Benz Ave., Cincinnati 5, Ohio.
Langemo, Elaine R. (48)
429 Bridge Ave., Albert Lea, Minn.
LANGENHAN, HENRY AUGUST (08)
Route 2, Box 970, Mercer Island, Wash.
Langer, Herman S. (47)
5201 W. North Ave., Milwaukee 8, Wis.
Langer, Jack Fred (47)
5201 W. North Ave., Milwaukee 8, Wis.
Langer, Walter S. (43)
5201 W. North Ave., Milwaukee 8, Wis.
Langerspacher, Joseph (48)
312 E. 136th St., New York 54, N. Y.
Langfield, George W. (47)
Troutlake, Wash.
Langlais, Frederich L. (48)
49 Birchwood Rd., Methuen, Mass.
Langlois, James R. (47)
P. O. Box 102, Baton Rouge, La.
Langmack, Raymond A. (43)
104 Front St., Beaver Dam, Wis.

Lanier, R. I. (45)
Lanier Drug Co., Birmingham, Ala.
Lanier, Roy W. (48)
2119 Hills Ave., Tampa 6, Fla.
Lansberry, Lois E. (47)
134 Mulberry St., Johnstown, Pa.
Lansdowne, James Warren (45)
5235 Cornelius Ave., Indianapolis 8, Ind.
Lantow, Ernest W. (45)
502—7th St., Rockford, Ill.
Lantz, Ada L. (45)
139—3rd St., N. W., Barberton, Ohio.
LANWERMEYER, CHAS. F. (20)
621 Keith Ave., Waukegan, Ill.
Lanzendorfer, E. Carl (47)
605 Miles Ave., Billings, Mont.
Lapenta, B. E. (38)
Box 6068, Indianapolis 20, Ind.
La Plante, Noel W. (49)
3 Arundel St., Andover, Mass.
LaPorte, Philip J. (45)
60 Mammoth Rd., Lowell, Mass.
Lappas, Lewis (48)
613 Evergreen St., West Lafayette, Ind.
Laquer, Fritz Oscar (45)
608 W. Upsal St., Philadelphia 19, Pa.
Lardier, Amuel E. (47)
c/o A. E. Lardier-Pharmacist, 115 Franklin, Nutley 10, N. J.
Larew, Marie N., (43)
919 Rider St., Iowa City, Iowa.
Large, James Albert (46)
103 E. Main St., Appalachia, Va.
Lariviere, Oscar A. (45)
600 Cottage St., New Bedford, Mass.
Lark, Donald F. (48)
Guerneville, Calif.
Lark, Wendell P. (49)
1514 McDougall, Detroit, Mich.
LaRocca, Joseph P. (47)
16 University Court Apts., Athens, Ga.
LaRoche, Charles A. (45)
326 E. Broughton, Savannah, Ga.
LaRochelle, Roland B. (49)
Main St., Wareham, Mass.
LaRose, Russell (43)
419 Central Ave., Bridgeport 7, Conn.
Larrick, LeRex (48)
Rt. 7, Box 464, Modesto, Calif.
Larsen, Robert Frederick (48)
2734 N. Stowell Ave., Milwaukee, Wis.
Larson, Clarence W. (49)
1 Calvary Rd., Duluth 3, Minn.
Larson, Donald A. (47)
c/o Mellow's Drug Store, Great Falls, Mont.
Larson, Enoch B. (46)
821 Front, Leavenworth, Wash.
Larson, Harold P. (47)
Med. Sec. Hdq. Second Army, Ft. George Meade, Md.
LARSON, MARTIN (06)
R. F. D. 2, Box 45, Andover, S. Dak.
Larson, Mary J. (48)
12 Park Way, Piedmont, Calif.
Larson, T. Elida (38)
Rt. 5, Box 2005, Kent, Wash.
Larson, T. L. (48)
319 Demers Ave., Grand Forks, N. Dak.
Larson, Willard F. (48)
Box 30, Palo Alto, Calif.
Larwood, Charles H. (46)
2801 W. Bancroft St., Toledo 6, Ohio.
Lascoff, Dudley V. (43)
677 Amsterdam Ave., New York, N. Y.
LASCOFF, FREDERICK DUDLEY (29)
1209 Lexington Ave., New York 28, N. Y.
Lasda, Ilga B. (49)
North St., Tully, N. Y.
Lash, Frank, Jr. (49)
1808 Harvard Rd., Richmond, Va.
Lash, Joseph H. (46)
2500 Chapline St., Wheeling, W. Va.
LaShier, Bion E. (49)
1110 N. Kenmore Ave., Hollywood 27, Calif.
Laskarzewski, Joseph J. (46)
138 Curtis St., Meriden, Conn.
Lasslo, Andrew (49)
1804 W. Congress St., Chicago 12, Ill.
Lassoff, Harold R. (49)
1488 Chapel St., New Haven, Conn.
Lassus, Victor Z. (44)
1615 Sherman Ave., Chico, Calif.
Latham, Clarence E. (47)
1115 W. 26th, Odessa, Tex.
Lathroum, Leo B., Jr. (42)
Collegio de Farmacia, Universidad de Puerto Rico, Rio Piedras, P. R.
Latimer, W. B. (45)
420—63rd St., Oakland 9, Calif.
Latino, Laura Marie (47)
1419 Royal St., New Orleans 17, La.
Latinsky, Edward B. (48)
1710 N. Eighth St., Philadelphia 22, Pa.
Latiolais, Clifton J. (47)
210 Jackson St., Lafayette, La.
Latture, James S., Jr. (47)
2210 Louisiana, Little Rock, Ark.
Lau, Henry S. C. (49)
3915 Spruce St., Apt. A-4, Philadelphia, Pa.
Lauber, Nicholas J. (49)
214 W. Lincoln, Ada, Ohio.
Laubscher, T. E. (47)
1211 S. Genesee Dr., Lansing 25, Mich.
Lauer, Matthew (47)
433 E. Michigan, Milwaukee 2, Wis.
Laufe, Joseph H. (45)
2 N. Pennsylvania Ave., Greensburg, Pa.
Laugaud, Michael (47)
1419 S. 50 Court, Cicero, Ill.
Laughton, John E. (49)
159 Mullin St., Watertown, N. Y.
Lauria, Anthony A. (48)
460 Fairmount Ave., Jersey City, N. J.
Laurier, Leo (41)
16—1st Ave. W., Longueuil, Que., Canada.
Lautenberg, William (47)
544 Market St., Paterson 3, N. J.
Lauter, Aaron M. (49)
1582 Chichester Ave., Linwood, Pa.
Lauter, Werner M. (37)
56 Highland Rd., Glen Rock, N. J.
Lautsbaugh, David J. (49)
19 Hoffman Ave., Mansfield, Ohio.
Lautsbaugh, Guy H. (46)
8 S. Main St., Mansfield, Ohio.
Lauve, Albert P. (32)
8206 Pritchard Pl., New Orleans, La.
Lavan, Edward F. (46)
2 Dellwood Rd., Worcester 4, Mass.
Lavender, Arnold J. (46)
4117—15th Ave., Brooklyn 19, N. Y.
Lavender, Jessie (45)
Eastsound, Wash.
Laverty, Eugene (47)
Middletown, Pa.
Law, Frank Fidelis (32)
320 Browning Rd., West Collingswood, N. J.
Law, Ives (46)
509 S. State St., Belvidere, Ill.
Lawinski, Helen Annedyt (43)
2036 Haddon Ave., Chicago 22, Ill.
Lawler, Edward T. (45)
Our Lady of Victory Hosp., 800 Ridge Rd., Lackawanna 18, N. Y.
Lawless, Patrick J. (45)
213 Main, Milford, Mass.
Lawlor, Michael, Jr. (47)
5632 Terry Ave., St. Louis 20, Mo.
Lawrence, George N. (40)
80-27—37th Ave., Jackson Heights, N. Y.
Lawrence, John Steve (43)
108 W. Emma, Springdale, Ark.
Lawrence, Marie E. (46)
182 S. Wyoming St., Hazleton, Pa.
Lawrence, R. H. (48)
351 S. Winebiddle Ave., Pittsburgh 24, Pa.
Lawson, Alfred M. (48)
5306 Annapolis Rd., Decatur Hgts. P. O., Hyattsville, Md.
Lawson, Arnold (35)
193 Baltimore Blvd., Brentwood, Md.
Lawson, C. E. (29)
1552 Hazelwood Ave., Los Angeles 41, Calif.
Lawson, Fred A. (45)
38 Montvale Ave., Stoneham 80, Mass.
Lawson, Harold (44)
1123 W. Markham, Little Rock, Ark.
Lawson, Howard J. (47)
4668 McNeil, Cincinnati 12, Ohio.
Lawson, Lloyd D. (47)
14102 Forrer, Detroit 27, Mich.
Lawson, Peter (49)
425 Roscoe St., Chicago, Ill.
Lay, John William (47)
607 Longwood Ave., Bedford, Va.
Layne, Harry F. (47)
2177 S. Delaware St., Indianapolis, Ind.
Lazar, Hyman Lawrence (47)
525 Rockaway Parkway, Brooklyn 12, N. Y.
Lazer, Zolen (49)
5515 Hays St., Pittsburgh 6, Pa.
Lazere, Bernard (45)
3606 Jackson, Sioux City 18, Iowa.
Lea, J. M. (46)
636 N. Main St., Danville, Va.
Leach, John H. (47)
2100 Ward St., Berkeley 5, Calif.
Leach, Mary Ruth (45)
University Hosp., Pharmacy Dept., Ann Arbor, Mich.
Leacock, Walter G. (47)
16800 N. Outer Dr., Dearborn Township, Mich.
Leahey, Robert R. (47)
6210 Fourth St., S., St. Petersburg, Fla.
Leak, William A. (47)
1348 S. Belmont Ave., Indianapolis 3, Ind.
Lear, Arthur K. (48)
28 Bolinas Rd., Fairfax, Calif.
Leary, Wilber T. (46)
8 Briardale Pl., Portsmouth, Va.
Leatherman, Albert G. (48)
2 Ridge Rd., Catonsville 28, Md.
Leavitt, Oscar (49)
66 Vernon St., Worcester 4, Mass.
Lebioda, Lillian R. (46)
12220 Sorrento, Detroit 27, Mich.
LeBlanc, Floyd J. (38)
c/o State College, Brookings, S. Dak.
Lebo, Robert H. (47)
702 Wayne St., Johnstown, Pa.
Lebow, Carlton (49)
5000 Hudson Ave., West New York, N. J.
Lebow, Irving (46)
83 Heyward St., Brooklyn 6, N. Y.
Lebowitz, Aaron L. (47)
Woodland Pharmacy, 1174 Woodland Rd., Clairton, Pa.
Lederman, Harold J. (48)
923 N. Leavitt St., Chicago 22, Ill.
Ledwich, Demain J. (47)
212 Wapato Ave., Wapato, Wash.
Lee, Bennett H. (47)
1314 Nelson Ave., New York 52, N. Y.
LEE, CHARLES O. (15)
University of Puerto Rico, Rio Piedras, P. R.
Lee, Frank L. (46)
Box 130, Middlesboro, Ky.
Lee, George A. (37)
1310 Matlock Ave., Honolulu 34 T. H.
Lee, Henry (49)
6½ Elm St., Cobleskill, N. Y.
Lee, J. C. (48)
4426 West Beach, Gulfport, Miss.
Lee, J. P. (39)
c/o Lee's Drug Store, Menomonie, Wis.
Lee, Lucille (45)
1231 S. Wilton Pl., Los Angeles 6, Calif.
Lee, Patricia S. (47)
1060 Washington St., San Francisco, 8, Calif.
Leech, W. D. (45)
910 S. San Gabriel, Pasadena 10, Calif.
Leeding, Doyle Wilbur (46)
Leeding's Pharmacy Talmage, Nebr.
Leedom, Walter H. (46)
209 Allegheny St., Hollidaysburg, Pa.
Leeds, Richard (47)
c/o Miller, 611 Ocean Ave., Brooklyn, N. Y.
Leefe, Guy L. (44)
210 State St., New Orleans, La.
Leer, Rudolph Jr. (46)
440 E. Ave., Coronado, Calif.
Leever, John S. (47)
3117 N. 9th, Kansas City, Kans.

**Leff, Aaron M. (46)**
1320 State St., New Haven, Conn.
**Leff, Elliot (46)**
450—28th Ave., San Francisco, Calif.
**Leff, Irving M. (44)**
1453 Jefferson, Buffalo 8, N. Y.
**Lefkowitz, Charles N. (47)**
310 Keystone Dr., New Kensington, Pa.
**Legare, Lela I. (49)**
120 S. Decatur, Montgomery, Ala.
**Legato, Joseph R. (48)**
282 Atlanta Ave., S. E., Atlanta, Ga.
**Legendre, Marion (26)**
124 Baronne St., New Orleans, La.
**Legg, Edward J. (47)**
135 Boyle Ave., Totowa Boro, N. J.
**Legg, Joseph E. (47)**
2809 King St., Columbus, Ga.
**Legg, Roy E. (49)**
318 Broadway, Seaside, Oreg.
**LeGoullon, Howard G. (49)**
812 Linden Ave., East Pittsburgh, Pa.
**Legrand, Adolfo L. (46)**
Box 3911, Santurce, P. R.
**Lehman, Carl A. (47)**
201 N. Barstow St., Eau Claire, Wis.
**Lehman, Rodney W. (46)**
4156 Deepwood Lane, Toledo 9, Ohio.
**Lehman, Vernon E. (46)**
1301 Valentine Rd., Westport Sta., Kansas City, Mo.
**Lehnert, Frank (49)**
2827—116th St., Toledo 11, Ohio.
**Lehning, Fred E. (49)**
308—28th St., Cairo, Ill.
**Lehr, Frank P. (46)**
5300 Lorain Ave., Cleveland, Ohio.
**Lehrman, Leon (48)**
149 Sterling St., Brooklyn 25, N. Y.
**Leibowitz, Oscar (48)**
16 Marlboro Ave., Brattleboro, Vt.
**Leich, Walter (44)**
Box 869, Evansville 1, Ind.
**Leiey, Herbert W. (47)**
1531 W. Market St., Steubenville, Ohio.
**Leiderman, Samuel E. (44)**
504 Nicholson St., N. W., Washington, D. C.
**Leidich, S. W. (41)**
1629 Walnut St., Philadelphia, Pa.
**Leinhos, Edwin V. (46)**
848 N. Keystone Ave., Indianapolis 1, Ind.
**Leipert, Frank J. (46)**
480 Clifton Ave., Newark 4, N. J.
**Leise, David (47)**
1437 Montana Ave., N. E., Washington 18, D. C.
**Leiser, David (47)**
1109 Collingwood Dr., St. Louis, Mo.
**Leisman, Robert H. (46)**
1315 Hepburn, Louisville 4, Ky.
**Leist, Jan (48)**
V. A. Hospital, Lyons, N. J.
**Leitch, Henry K. (49)**
1122 N. Olive St., South Bend 16, Ind.
**Leitzow, Herman W. (42)**
36 Ambrey Rd., Upper Montclair, N. J.
**LeJeune, Sidney J. (45)**
2746 Jasmine St., New Orleans 17, La.
**Leland, William D. (47)**
242 N. Bluff, Wichita, Kans.
**LeMaistre, John W. (49)**
Chattanooga Medicine Co., Chattanooga 9, Tenn.
**LeMaitre, Lucien H. (38)**
278 Manning Blvd., Albany 5, N. Y.
**Lembach, Anthony J. (46)**
2527—9th Ave., Greeley, Colo.
**Lemberger, August P. (47)**
2444 N. 48th St., Milwaukee, Wis.
**Lemberger, Max A. (42)**
2537 N. 17th St., Milwaukee, Wis.
**Lemberger, Max N. (30)**
324 E. Wisconsin Ave., Milwaukee 2, Wis.
**Lembke, Carl H. F. (47)**
135 W. Glenaven Ave., Youngstown 7, Ohio.
**Lembo, Ralph V. (46)**
83 Bloomfield, Paterson 3, N. J.
**Lemmelin, Leopold H. (47)**
117 Chapin St., Southbridge, Mass.
**Lemmon, Howard E. (47)**
1537 Mt. Vernon Ave., Columbus 3, Ohio.
**Le Moine, Herman M. (47)**
Box 91, Lutcher, La.
**Lemon, A. B. (24)**
3435 Main St., Buffalo, N. Y.
**Lemon, Lois Jean (47)**
1527 State St., Santa Barbara, Calif.
**Lemons, Robert F. (48)**
1918 S. Washington, Wichita, Kans.
**Lenga, Casimer M. (49)**
2224 Sanford St., Toledo 7, Ohio.
**Lenga, Rose (49)**
2224 Sanford St., Toledo 7, Ohio.
**Lenox, George H. (48)**
P. O. Box 549, Oregon City, Oreg.
**Lenrow, Walter A. (47)**
14 W. Madison Ave., Dumont, N. J.
**Lense, Howard E. (47)**
5544 S. Peoria, Chicago 21, Ill.
**Lenz, Lois (46)**
943 S. Dakota, Butte, Mont.
**Lenz, William J. (39)**
314 Armory Pl., Louisville, Ky.
**Leon, Bernard (49)**
24-51—38th St., Astoria, L. I. 3, N. Y.
**Leonard, Clifford S. (29)**
c/o Dept. of Pathology, Yale Med. Sch., 333 Cedar St., New Haven 11, Conn.
**Leonard, Edwin Jr. (37)**
70 W. 40th St., New York 18, N. Y.
**Leonard, Robert M. (47)**
College of Pharmacy, Univ. of Minn., Minneapolis 14, Minn.
**Leone, Daniel C. (46)**
50 Main St., Norwich, Conn.
**LePain, Albert N. (43)**
286 Hamilton, Southbridge, Mass.
**Lerman, Abraham S. (47)**
1362 Northern Blvd., Roslyn, N. Y.
**Lerner, Oscar (38)**
171 W. 95th St., New York 25, N. Y.
**Lerner, Samuel (47)**
2540 Monterey St., Detroit 6, Mich.
**Leschkowitz, David (49)**
U.S.V.A. Hospital, Manhattan Beach, Brooklyn 29, N. Y.
**LESCOHIER, A. WILLIAM (45)**
663 University Pl., Grosse Pointe 30, Mich.
**Lesiakowski, Z. J. (47)**
146 W. Dominick St., Rome, N. Y.
**Leslie, A. Y. (47)**
c/o Leslie Drug Co., P. O. Box 249, McDonough, Ga.
**Leslie, Harry (46)**
2677 Gardner Ave., Berkley, Mich.
**Lesser, Lawrence (47)**
147-25—68th Dr., Flushing, L. I., N. Y.
**Lesser, Milton A. (38)**
65 Ocean Ave., Brooklyn 25, N. Y.
**Lesshafft, Charles, Jr. (46)**
3606 Dayton Ave., St. Matthews 7, Ky.
**Lester, Hugh A. (49)**
661 Sheridan Rd., Chicago 13, Ill.
**Lester, Louis C. (45)**
Harpers Hospital c/o Pharmacy, 3825 Brush St., Detroit 1, Mich.
**Lester, Warren A. (47)**
Rt. 9, Box 1831, Sacramento, Calif.
**Lete, Roman, Jr. (47)**
4340 Forest Pk., St. Louis 8, Mo.
**Lettieri, Frank (46)**
587 Grand St., Jersey City 4, N. J.
**LETZELTER, M., JR. (26)**
1726 Lincoln Ave., Pittsburgh 6, Pa.
**LEUALLEN, E. E. (40)**
Columbia Univ. College of Pharmacy, 115 W. 68th St., New York 23, N. Y.
**Leupold, Karl F. (47)**
550 Avalon Ave., Akron 20, Ohio.
**Leuschner, Julius O. (46)**
1050 W. 6th St., Los Angeles 14, Calif.
**Leussing, Daniel L. (49)**
3525 Warsaw Ave., Cincinnati 5, Ohio.
**Levant, Leo L. (49)**
60 Cheney St., Roxbury, Mass.
**LeVeille, Charles W. (48)**
334 S. Central, Marshfield, Wis.
**Leven, Abraham S. (42)**
258 Main St., Yuma, Ariz.
**Levenson, Bernard (48)**
69-33—175th St., Flushing, L. N. Y.
**Levenson, Harry (49)**
124 S. 50th St., Philadelphia, Pa.
**Levenstein, Irving (44)**
123 Hawthorne St., Roselle Park, N. J.
**Leventhal, Babette (49)**
77 W. 36th St., Bayonne, N. J.
**Leventhal, Reuben (43)**
77 W. 36th St., Bayonne, N. J.
**Levick, Henry Crulley (25)**
419 Boylston St., Boston, Mass.
**Levin, Ezra (47)**
VioBin Corp., Monticello, Ill.
**Levein, Harold P. (49)**
4009 B Fordleigh Rd., Baltimore 15, Md.
**Levin, Harry (47)**
499 Merchant St., Ambridge, Pa.
**Levin, Harry E. (47)**
6800 W. North Ave., Chicago 35, Ill.
**Levin, Harvey B. (49)**
1421 Farwell Ave., Chicago 26, Ill.
**Levin, Nathan (47)**
College of Pharmacy, Howard Univ., Washington 1, D. C.
**Levin, Norman J. (49)**
1407 Reisterstown Rd., Pikesville 8, Md.
**Levin, Sam D. (48)**
903 Newton Ave. N., Minneapolis 11, Minn.
**Levin, William (45)**
1236 E. Susquehanna Ave., Philadelphia, Pa.
**Levine, Abraham (47)**
256 Second St., Palisades Park, N. J.
**Levine, Harry (47)**
2661 N. 83rd St., Milwaukee 13, Wis.
**Levine, Irwin S. (47)**
460 Georgia Ave., Brooklyn 7, N. Y.
**Levine, Jerome (47)**
61—25 Woodside Ave., Woodside, L. I., N. Y.
**Levine, Marshall J. (48)**
2 Shannon St., Worcester 4, Mass.
**Levine, Reuben (49)**
1531—57th St., Brooklyn, N. Y.
**Levine, Robert Myer (42)**
68 American Legion Hwy., Dorchester, Mass.
**Levine, Sol (49)**
215 S. Pearl St., Albany 2, N. Y.
**Levine, Solomon M. (47)**
350 Telfair St., Augusta, Ga.
**Levine, William (39)**
100 E. 38th St., Paterson 4, N. J.
**Levins, Clifton J. (47)**
295 S. Downing, Denver, 9 Colo.
**Levinsky, Israel (42)**
221 Broadway, Camden, N. J.
**Levitan, Sydney (47)**
226 S. 46th St., Philadelphia 39, Pa.
**Levitch, Mrs. Seymour (47)**
9 Chapman Pl., Irvington, N. J.
**Levitte, Jacob (46)**
111 Second Ave., E., Roselle, N. J.
**Levy, Benjamin (45)**
41-19—41st St., Apt. 5E, Long Island City 4, N. Y.
**Levy, Louis (46)**
299 Stuyvesant Ave., Lyndhurst, N. J.
**Levy, Morton A. (48)**
1545 E. 23rd St., Brooklyn 10, N. Y.
**Lew, Clement Leong (46)**
1323 Mason St., Apt. 102, San Francisco, Calif.
**Lew, Mabel (45)**
229 Bridge St., Watsonville, Calif.
**Lewandowski, Zygmund (49)**
3320 Franklin Ave., Toledo 8, Ohio.
**Lewicki, Joseph A. (39)**
5558 S. Pulaski Rd., Chicago 29, Ill.
**Lewing, Albert W. (45)**
c/o Tampax, Inc., Palmer, Mass.

Lewis, Alfred (48)
107-47—159th St., Jamaica 4, N. Y.
Lewis, Charles H. (40)
301 William St., Fredericksburg, Va.
Lewis, Charles H. (25)
2216½ E. Madison St., Seattle, Wash.
Lewis, Edward (47)
440 Fairmount Ave., Philadelphia 23, Pa.
LEWIS, ERNEST GRANT (92)
701 Center St., Jamaica Plains, Mass.
Lewis, Frank (47)
c/o Globe Drug Co., Fresno, Calif.
Lewis, Howard B. (34)
317 W. Medical Bldg., University of Michigan, Ann Arbor, Mich.
Lewis, James (47)
6341 N. 24th, Omaha, 11, Nebr.
Lewis, Joseph R. (47)
123 E. Ludington Ave., Ludington, Mich.
LEWIS, LAWRENCE C. (10)
Tuskegee, Ala.
Lewis, Samuel R. (47)
510 N. Negley Ave., Pittsburgh 6, Pa.
Lewis, Thomas (48)
Towers Hotel, 25 Clark St., Brooklyn, N. Y.
Lewy, Curt (47)
27 Rua Carlos Goes, Apt. 304, Rio de Janeiro, Leblon, Brazil.
Leyland, Harry M. (48)
524 Hale, Cincinnati 29, Ohio.
Liberalli, Carlos H. R. (47)
1631 Eugenio de Lima, Sao Paulo, Brazil, S. A.
Liberfarb, Robert I. (49)
Long Island Hospital, Boston Harbor 13, Mass.
Liberman, Samuel S. (47)
115 W. 68th St., New York 23, N. Y.
Libros, Jennie B. (44)
257 S. 17th St. Philadelphia, Pa.
Licata, Lawrence C. (44)
1829 Scarborough Ave., Exeter, Pa.
Lich, Robert (40)
710 Weldon Ave., Fresno, Calif.
Lichtenfeld, Julius (39)
427—83rd St., Brooklyn 9, N. Y.
Lichtenheld, Harriet A. (42)
3000 Canondelet St., New Orleans, La.
Lichtenstein, Elliott A. (47)
238 Morris Ave., Springfield, N. J.
Lichtenstein, Samuel (48)
52 O St., N. W., Washington, D. C.
Lichtin, Aaron (23)
5439 N. 12th St., Philadelphia 41, Pa.
Lidell, R. J. (48)
Box 84, Tulelake, Calif.
Lieber, Stanely (48)
537 Powell St., Brooklyn 12, N. Y.
Lieberfeld, Charles E. (48)
1711 Boulevard, Jersey City 5, N. J.
Lieberman, Ernest (49)
635 S. W. 22nd Rd., Miami, Fla.
Lieberman, Morris D. (47)
2200 Broadway, Gary, Ind.
Liebman, Simon S. (48)
2178—28th Ave., San Francisco 16, Calif.
Liebmann, Boris M. (43)
353 W. 57th St., New York, N. Y.
Lief, Lloyd (44)
3033 Brighton 13th St., Brooklyn, N. Y.
Lien, Marian (46)
Merrifield, N. Dak.
Liepack, Ben H. (46)
1517 Blvd. of the Allies, Pittsburgh 19, Pa.
Light, Edgar H. (46)
Box 326, Pedro Miguel, Canal Zone.
Light, Fred (47)
8 Plaza, Silver Beach, New York 61, N. Y.
Lightner, James Q. (44)
230 Maclay St., Harrisburg, Pa.
Ligorio, Cosmo (31)
7202 Loubet St., Forest Hills, N. Y.
Lill, George A. (47)
Broward Gen. Hosp., Pharmacy, Fort Lauderdale, Fla.
Lill, Margart (46)
267 E. Bertsch, Lansford, Pa.

Lille, Henri H. (48)
2632 E. Washington St., Pasadena 8, Calif.
LILLY, ELI (06)
c/o Eli Lilly & Co., Indianapolis, Ind.
Lilly, Frank O. (44)
5617 Noyes Ave., S. E., Charleston, W. Va.
Lilly, Josiah Kirby, Jr. (16)
Woodstock Dr., Indianapolis, Ind.
Lim, Katie Moy (42)
Mt. Alto Hospital Pharmacy, 2650 Wisconsin Ave., N. W., Washington, D. C.
Lind, Charles Henry (43)
201 Milford Ave., Newark 8, N. J.
Lind, Leslie (49)
1501 Guadalupe, Austin, Tex.
Lindberg, Elmer L. (47)
4682 Woolworth, Omaha 6, Nebr.
Lindemann, George E. (47)
4856 Forestville Ave., Chicago 15, Ill.
Lindemann, Otto Henry (42)
668 Seneca Ave., Brooklyn, N. Y.
Linden, Leo (47)
8445½ Chestnut Ave., South Gate, Calif.
Lindenbaum, Morris (47)
5 S. Main St., Reisterstown, Md.
Linderman, Samuel (48)
733 S. Sierra Bonita Los Angeles 36, Calif.
Lindgren, Gus (45)
c/o McKesson & Robbins Inc., 117-21 N. Santa Fe, Wichita 1, Kans.
Lindsay, John L. (46)
Lindsay Drug Co., 443 Fifth Ave., Troy, N. Y.
Liner, Milton H. (49)
1417 W. Market St., Pottsville, Pa.
Ling, Chi-shau (49)
674 Washington Blvd., Baltimore 1, Md.
Lingle, Robert M. (32)
815 E. 57th St., Indianapolis 5, Ind.
Linn, Irwin H. (46)
858 Stuyvesant Ave., Irvington, N. J.
Linn, Kennie M. (39)
All India Missions, Bowringpet, S. India.
Linn, Paul D. (46)
1137 Broadway, Parsons, Kans.
Linn, Webster T. (47)
8420 S. W. Jamison Rd., Portland 1, Oreg.
Linney, Harry A. (49)
Box 1424, George West, Tex.
Lins, Henry A. (46)
7 E. Exchange St., Akron, Ohio.
Linton, Anderson M., Jr. (47)
445 E. View Dr., Chattanooga 4, Tenn.
Liosanoff, A. G. (48)
2825 Lawton St., San Francisco 22, Calif.
Liotta, Frank J. (47)
157 Weirfield St., Brooklyn 21, N. Y.
LIPETZ, MORRIS (31)
40 N. Ridge St., Patchogue, N. Y.
Lipowitz, Eugene (43)
4853 N. 10th St., Philadelphia 41, Pa.
Lippert, Carl H. (42)
3432 W. Center St., Milwaukee, 10, Wis.
Lippold, William (47)
833 W. Burleigh, Milwaukee 6, Wis.
Lipshitz, Harold (48)
590 Kosciusko St., Brooklyn, N. Y.
Lish, Paul M. (49)
157 Park Ave., Pocatello, Idaho.
Lisk, D. Clyde (44)
1961 Crescent Ave., Charlotte, N. C.
Liska, Mae M. (45)
2720 S. Drake Ave., Chicago 23, Ill.
Lisker, Lester (49)
2205 B Baird Blvd., Camden, N. J.
List, L. W. (46)
412 Broadway, Puducah, Ky.
Litman, Abraham (46)
252 S. Highland Ave., Pittsburgh 6, Pa.

Litten, Lloyd S. (46)
1311 E. 10th St., Indianapolis, Ind.
Little, Betty C. (49)
1180 Oglethorpe, S. W., Atlanta, Ga.
Little, Ernest (24)
New Jersey College of Pharmacy, Cor. Broadway, Lincoln & Arlington Aves., Newark, N. J.
Little, Ralph M., Jr. (47)
422 Ninth St., New Kensington Pa.
Little, William Charles (47)
428 N. Taylor Ave., Oak Park, Ill.
Litvin, Sidney Benjamin (44)
3406 Duvall Ave., Baltimore, Md.
Litwinowicz, Harry H. (49)
11213 Revere Ave., Cleveland, Ohio.
Livingston, Raymond J. (47)
Roberts Point, Siesta Key, Sarasota, Fla.
Livingston, William J. (47)
1020 Blaine Ave., Indianapolis 3, Ind.
Livingstone, Sarah L. (49)
65-56 N. Main St., Pleasantville, N. J.
Llorens, Washington (48)
San Juan, P. R.
Lloyd, Kenneth W. (49)
2892 Bellaire, Denver 7, Colo.
LLOYD, JOHN THOMAS (20)
6 Needham Pl., Ithaca, N. Y.
Lloyd, W. R. (41)
Armour Research Foundation, Edificio Guardiola 504, Mexico, D. F.
Lobraico, Frank (49)
3342 Clifton St., Indianapolis, Ind.
Locascio, Salvatore (47)
Hammond, La.
Lock, Ernest L. (46)
5155 Lankershim, North Hollywood, Calif.
Locke, W. E. (40)
108 Overbrook Rd., Richmond, Va.
Locker, Frank (42)
1417 Caroline St., Alameda, Calif.
Lockett, William O. (48)
144 S. E. 14th St., Miami 36, Fla.
Lockie, L. Maxwell (45)
130 Morris Ave., Buffalo 14, N. Y.
Lockie, Lawrence D. (47)
3435 Main St., Buffalo, N. Y.
Lockwood, Theodore R. (27)
74 Elmhurst Rd., Newton, Mass.
Loeber, Grace D. (49)
1434 Lakewood Ave., Detroit 15, Mich.
Loebig, Vincent P. (47)
474 Braddock Ave., Uniontown, Pa.
Loertz, Albert F. (48)
1307 Central Ave., Columbus, Ind.
Loes, Franz E. (41)
440 Washington St., New York, N. Y.
Loew, Jay (49)
791 Garden St., New York 57, N. Y.
Lofdahl, Douglas N. (48)
123 S. 7th St., Montevideo, Minn.
Lofgren, David A. (42)
30 E. 111th St., Chicago, Ill.
LOFGREN, FREDERICK V. (20)
549 N. E. 106th St., Miami 38, Fla.
Logan, Howard M. (46)
R. R. 8, Box 366K, San Antonio, Tex.
Logan, James Sydney (47)
Box 94, Univ. of New Mexico, Albuquerque, N. Mex.
Logsdon, Bob (46)
1804 W. Congress St., Chicago, Ill.
Lohmaier, C. L. (49)
Columbus, Mont.
LOHMANN, JOHN (04)
887 Market St., Kingston, Pa.
Lohr, Joel D. (49)
Nichols V. A. Hospital, Louisville 2, Ky.
Lohr, Joseph E. (46)
24 E. Northwest Hgwy., Arlington Heights, Ill.
Lohrman, Herbert A. (43)
53 Valley View Dr., Morristown, N. J.
Lohrmann, Kurt (43)
448 W. Poppyfields Dr., Altadena, Calif.

Loiacono Andrew B. (46)
R. F. D. 1, Box 243A, Lombard, Ill.
Lolli, Alfred M. (48)
7159 S. Honore St., Chicago, Ill.
Lombardi, Albert (45)
358 Centre St., Jamaica Plain, Mass.
Lombardi, Dominic Francis (42)
14 Murphy Ct., Newton 58, Mass.
Lombardi, Nicholas P. (42)
170—87th St., Brooklyn, N. Y.
Lombardi, Victor N. (47)
3401 Middlebranch Rd., Canton 7, Ohio.
Londino, Aldo V. (49)
520 Rosslyn Ave., Springdale, Pa.
Long, D. B. (47)
500 W. Michigan Ave., Battle Creek, Mich.
Long, Jacob A. (47)
69 E. Side Sq., Jacksonville, Ill.
Longaker, L. B. (44)
1243 S. 57th St., Philadelphia 43, Pa.
Longenecker, Betty Lou (45)
402 N. Duke St., Lancaster, Pa.
Longino, Jacob P. (47)
Silver Creek, Miss.
Longinotti, Charles (49)
100 S. Second St., San Jose, Calif.
Longley, Lester Clifford, Jr. (47)
137 Hillside Ave., Box 242, Gadsden, Ala.
Longley, Raymond Lyndon (48)
Ben's Pharmacy, Pecos, Tex.
Longley, Robert E. (47)
1245 Market St., Chattanooga, Tenn.
Longo, Anthony (43)
125 Smith St., Cranston 5, R. I.
Longobardo, Helen G. (49)
110-80 Queens Blvd., Forest Hills, N. Y.
Longwell, Robert C. (48)
514 N. Water St., Sparta, Wis.
Longyear, Robert Livingston, Jr. (36)
c/o Sydney Ross Co., Administracion Correos 51, Mexico, D. F., Mexico.
Lonie, David D., Sr. (49)
3415 N. E. Shaver St., Portland 13, Oreg.
Lonie, Wallis G. (46)
Gering, Nebr.
Loo, Kirby W. K. (47)
1402 Lusitana St., Honolulu 13, Hawaii.
Loo, Y. S. (31)
1404 Lusitana St., Honolulu, Hawaii.
Look, Arthur C. (40)
112 E. Second, Kaukauna, Wis.
Look, C. A. (41)
2901 Harrison St., Oakland 11, Calif.
Loomis, James D. (49)
Cor. Chruch St. & Salem Ave., Carbondale, Pa.
Lopatin, William S. (43)
2300 South Broad St., Apt. H9, Trenton, N. J.
Lopez-D, Ivan (48)
Carrera 21, No. 2940, Manizales, Caldas, Colombia, S. A.
Lopez, Luz E. (49)
Box 72, Catano, P. R.
Loppnow, William F. (47)
432 E. Chambers St., Milwaukee 12, Wis.
Lopyan, Herman R. (47)
886 Rutland Rd., Brooklyn 3, N. Y.
Lorber, Emanuel (47)
123 Grove St., Montclair, N. J.
Lord, Clarence Sterling (45)
214 N. Main St., Mansfield, Mass.
Lord, Ralph M. (49)
231 Main St., Tannersville, N. Y.
Lord, Robert W. (47)
Cornell, Wis.
LORDI, D. GEORGE (26)
759 Springfield Ave., Irvington, N. J.
Lorenc, Eugene J. (47)
Itasca Pharmacy, Itasca, Ill.
Lorena, Curtis F. (48)
612 Johnson St., Clarksville, Ark.
Lorenzen, Edward V. (49)
221 N. Jackson, Roseburg, Oreg.
Loring, Howard Goodwin (47)
45 Grove St., West Concord, Mass.
Lory, René (47)
10 Ter Rue de la Varenne, Melun (Seine & Marne) France.

Loseff, Samuel S. (40)
116 S. Michigan Ave., Rm. 1108, Chicago 3, Ill.
Losieczka, Frank A. (48)
8312 Brandon Ave., Chicago 17, Ill.
Losleben, Roman J. (46)
Malta, Mont.
Loustalet, Edith M. (48)
4040 Garden Ave., Los Angeles 26, Calif.
Love, Jack Wilson (47)
503 Fifth Ave., S., Nampa, Idaho.
Lovell, Everett A. (47)
99 Simcoe St. S., Oshawa, Ont., Canada.
Lovell, Russell F. (41)
476 Wirth Ave., Akron 12, Ohio.
LOVOTTI, CARL D. (39)
2111 Hyde St., Apt. 506, San Francisco 9, Calif.
Low, David D. (47)
314 Woodlawn, Hot Springs, Ark.
Lowder, Thomas M., Jr. (47)
Wilbur Wright Homes, West Columbia, S. C.
Lowe, Clement W. (48)
69 Franklin Dr., Bridgeton, Cumberland Co., N. J.
Lowe, Reginald W. (49)
1014 Granger, Ann Arbor, Mich.
Lowell, William A. (44)
22 Sheffield St., Portland 4, Maine.
Lowenthal, Maurice (44)
4916 Reading Rd., Cincinnati 29, Ohio.
Lowenthal, Solomon (47)
212-15 Jamaica Ave., Queens Village 9, N. Y.
Lowry, Alfred John, Jr. (45)
Box 1981, Little Rock, Ark.
LOWRY, WILLIAM JOHN (06)
Elizabethan Apts., Garrison Blvd. & Bateman Ave., Baltimore, Md.
Loyet, Edward (47)
R. R. 1, Collinsville, Ill.
Lozada, Hector (49)
Bo. Rio Canas, Rm. 30, Hm. 5, Caguas, P. R.
Lubinsky, Samuel H. (47)
330 E. 23rd St., Paterson, N. J.
Lubitz, Joseph A. (38)
173 Bill Ave., Groton, Conn.
Lubowe, Irwin I. (48)
241 Central Park W., New York 24, N. Y.
Lucas, George D. (44)
205 Lackawanna Ave., Olyphant, Pa.
Lucas, Howard B. (46)
204 Gay St., Plain City, Ohio.
Lucas, James J. (48)
15860 Washburn, Detroit 21, Mich.
Lucas, Joseph S. (42)
109 Mulberry Dr., Metairie 20, La.
Lucas, William J. (47)
442 St. Gabriel St., Montreal, Que., Canada.
Lucciola, Francis A. (46)
155 Grove Ave., Verona, N. J.
Luce, L. C. (49)
240 N. Broadway, P. O. Box 4289, Portland 8, Oreg.
Luce, Roland F. (47)
139 Navajo Ave., San Francisco 12, Calif.
Luckney, Samuel A. (46)
244 E. Genessee St., Buffalo 4, N. Y.
Luczak, Constance J. (49)
706 Highland Ave., Lafayette, Ind.
Ludwig, Andrew Francis (25)
2838 Edmondson Ave., Baltimore, Md.
Ludwig, David F. (47)
3621 N. 16th, Tacoma, Wash.
Luebert, Frederick C. A. (46)
1418 N. 4th St., Philadelphia 22, Pa.
Lueck, Leslie M. (48)
Box 316, Bloomer, Wis.
Lueckert, A. C., Jr. (46)
4804 Gosnold Ave., Norfolk, Va.
Luehrs, W. C. (47)
Fitzimons Gen. Hosp., Denver 8, Colo.
Luers, Raymond J. (48)
2314 W. Lakewood Ave., Lima, Ohio.
Luers, Richard B., Jr. (47)
15775 Mansfield, Detroit 27, Mich.
Lugg, E. Curtis (45)
303 S. Minnesota Ave., Sioux Falls, S. Dak.

Lukasek, Otto W. (45)
4201 W. 26th St., Chicago 23, Ill.
Lukaszewicz, John J. (45)
719 Northampton St., Buffalo 11, N. Y.
Lukaszewski, Leon S. (45)
9101 Van Dyke, Detroit 13, Mich.
Lukomski, George L. (47)
2007 W. Forrest Home Ave., Milwaukee 7, Wis.
Lum, Kenneth H. (44)
Chun Hoon Pharmacy, P. O. Box 1839, Honolulu, Hawaii.
Lund, Richard H. (46)
501 N. Mason St., Bloomington, Ill.
Lund, Theodore Roosevelt (27)
Lancaster, N. H.
Lunsky, Louis (48)
12746 Woodrow Wilson, Detroit 6, Mich.
Lunt, Albert W. (47)
2314 S. 17th St., Lincoln 2, Nebr.
Luongo, Frank C. (49)
368 Richmond Ave., Buffalo 13, N. Y.
Luongo, Guy R. (45)
105 W. Merchant St., Audubon, N. J.
Luongo, Hugh J. (47)
75-63—178th St., Flushing, N. Y.
Lupayne, Joseph A. (49)
11605 Virginia Ave., Box 284, Lynwood, Calif.
Lurensky, Maurice L. (49)
124 Ruthven St., Allston 24, Mass.
Lurie, Hyman (47)
233 Somerset St., North Plainfield, N. J.
Lusby, R. W. (33)
Central Drug Co., 12th & E Sts., N. W., Washington, D. C.
Lusk, Miles E. (46)
4225 W. 21st Pl., Chicago 23, Ill.
Lutfy, George A. (47)
3518 Bedford Rd., Detroit 24, Mich.
Lutfy, Xenia (49)
3518 Bedford Rd., Detroit 24, Mich.
Lutz, Donald F. (49)
541 Main St., Poughkeepsie, N. Y.
Lutz, Walter E. (48)
6640 Delmar Blvd., St. Louis 5, Mo.
Lutzky, Joseph (45)
1030—4th St., S. W., Washington 4, D. C.
Lyhte, Robert (47)
1261 Merriam Ave., Bronx, N. Y.
Lyle, Ronald George (47)
307 E. 60th, Seattle 5, Wash.
LYMAN, DAVID S. (31)
636 Church St., Evanston, Ill.
LYMAN, R. A. (08)
Univ. of Nebraska, Lincoln, Nebr.
Lynam, Edward J. (48)
415 Poppleton, Omaha, Nebr.
Lynch, Edward T. (49)
149 Main St., Hackettstown, N. J.
Lynch, Elizabeth M. (46)
3775 Drakewood Dr., Cincinnati 9, Ohio.
Lynch, Harry R. (48)
285 Oakwood Rd., Charleston 4, W. Va.
Lynch, Jack (45)
Ambassador Apts., 1209 S. W. 6th Ave., Portland 5, Oreg.
Lynch, J. J. (43)
414 McCarty, Boise, Idaho.
Lynch, Jean Mary (48)
U. S. Marine Hospital, 4141 Clarendon Ave., Chicago 13, Ill.
Lynch, John Andrew (45)
2101 N. 8th St., Philadelphia 22, Pa.
LYNN, CHARLES J. (06)
Eli Lilly & Co., Indianapolis, Ind.
LYNN, ELDIN VERNE (23)
Massachusetts College of Pharmacy Boston 15, Mass.
Lynn, Frank E. (47)
Main St., Utica, Ohio.
Lyon, Laurence T. (46)
Hurley Hospital, Flint, Mich.
Lyon, Richard A. (47)
111 Locust St., Pittsburgh 23, Pa.
Lyon, Robert F. (46)
80 Balfour Dr., Coldwater, Mich.
Lyons, Irving L., Jr. (48)
5416 S. Saratoga St., New Orleans 15, La.
Lyons, James E. (46)
465 S. Northwest Hgwy., Park Ridge, Ill.
Lyons, Nathaniel A. (46)
6962 N. Clark St., Chicago 26, Ill.

Lyons, Paul H. (48)
103 W. 3rd St., North Little Rock, Ark.
Lyons, Robert G. (43)
293 N. Broad St., Elizabeth, N. J.
Lyons, Roland F. (47)
Main St., Schroon Lake, N. Y.
Lyons, W. Monroe (48)
2344 St. Charles Ave., New Orleans 13, La.
Lysaght, Harold V. (47)
2856 N. 78th St., Milwaukee, Wis.

## M

Maas, Jan (40)
P. O. Box 297, Katonah, N. Y.
Maas, Norman H. (49)
500 Romayne Ave., Racine, Wis.
Mabardie, Alexander A. (46)
16 Clinton St., Brooklyn 2, N. Y.
Mabie, Max G. (48)
Green, Kans.
Mabis, Arthur (43)
415 E. Liberty Dr., Wheaton, Ill.
MacAulay, W. C. (45)
College of Pharmacy, Univ. of Saskatchewan, Saskatoon, Sask., Canada.
MacCartney, John A. (46)
Parke, Davis & Co., Detroit, Mich.
MacDonald, Charles N. (48)
906 Nela View Rd., East Cleveland 12, Ohio.
MacDonald, J. A. (46)
P. O. Box 176, Oceanside, Calif.
MacDonald, J. Gordon (47)
c/o Old-Reliable Drug Co., 3005 Industrial Ave., Flint 5, Mich.
Macdonald, J. Vans (36)
929 W. Georgia St., Vancouver, B. C., Canada.
MacDonald, James A. (47)
101 College St., Toronto, Canada.
MacDonald, Joseph D. (45)
760 Lotas Ave., Porterville, Calif.
MacDonald, Lee H. (43)
c/o Upjohn Co., Kalamazoo 99, Mich.
MacDonnell, Donald R. (47)
Wissahickon Gardens, Apt. 8C, Germantown, Philadelphia, Pa.
MacDougal, Paul S. (47)
924 S. Lincoln, Park Ridge, Ill.
Macek, Frank J. (47)
1736 Aliceanna St., Baltimore 31, Md.
Macek, Thomas J. (39)
25 Vine Ave., Irvington 11, N. J.
MacFarland, Dorothy M. (47)
1768 Grevelia, South Pasadena, Calif.
MacGregor, M. (47)
907 N. 7th, Kansas City, Kans.
Machida, Yutaka (49)
30 Baldwin Ave., P. O. Box 331, Paia, Maui, Hawaii.
Macht, David I. (23)
Div. of Pharmacology, Sinai Hospital Lab., Baltimore 5, Md.
Mack, David S. (46)
930 W. Federal St., Apt. 42, Youngstown, Ohio.
Mack, Howard (46)
150 Atlantic St., Hackensack, N. J.
Mack, Walter L. (49)
3005 Stickney Ave., Toledo 8, Ohio.
Macke, Ronald (39)
2045 Treasure St., New Orleans 19, La.
MacKnight, Jessie I. (45)
Maritime College of Pharmacy, Med. Sciences Bldg., College St., Halifax, Nova Scotia, Canada.
Mackowski, Miecislas T. (46)
1519 West Lincoln Ave., Milwaukee 7, Wis.
MacLean, Jack (49)
2412 Pomeroy Pl., Columbus 2, Ohio.
Macri, Dominic M. (47)
12 Columbus Ave., Wilkes-Barre, Pa.
Macurdy, Warren K. (47)
115 N. Jackson St., Glendale 8, Calif.
MacWilliam, Thomas W. (45)
1145 Hayes St., Apt. 7, San Francisco 17, Calif.
Maday, Wolodomyr W. (49)
University of Alberta Hospital, Edmonton, Alberta, Canada.
Maddux, M. Coutolenc (45)
1819 Francisco St., Berkeley 3, Calif.
Madeley, Warren H. (47)
R. F. D. Box 93, Newcastle, Calif.
Madeley, Wayne T. (47)
R. F. D. Box 93, Newcastle, Calif.
Mader, William J. (49)
2080 Nicholl Ave., Scotch Plains, N. J.
Madera, J. R. (20)
2901 W. 59th St., Chicago 29, Ill.
Madison, William L. (47)
Bristol Laboratories, 401 W. Taylor St., Syracuse 1, N. Y.
Madland, Lawrence F. (47)
914 N. Plankinton Ave., Milwaukee 3, Wis.
Madura, John P. (47)
604 Avenue C, W., Bismark, N. Dak.
Madura, Michael A. (42)
317 Cedar St., South Amboy, N. J.
Madura, Sophia C. (43)
317 Cedar St., South Amboy, N. J.
Maffey, Michael A. (45)
764 Kearny Ave., Arlington, N. J.
Magagna, Marino A. (49)
c/o Tina Arnoldin, Revo, Trentino, Italy.
Magalian, Paul (49)
Vet. Adm. Regional Office, Medical Dept., Montgomery, Ala.
Maggio, George L. (47)
136 Fleming Ave., Newark 5, N. J.
Maggiora, Maurice J. (46)
4810 Telegraph Ave., Oakland 9, Calif.
Magid, Jacob (46)
89 Storms Ave., Jersey City 5, N. J.
Magid, Louis (46)
113 W. 18th St., New York 11, N. Y.
Magistro, Mary N. (44)
64 Fourth Ave., East Orange, N. J.
Magnello, Clyde (46)
16 W. Liberty St., Girard, Ohio.
Magnuson, Margaret M. (46)
1111 Albers, Grand Rapids, Mich.
Magnusson, Sigurdur (44)
P. O. Box 251, Reykjavik, Iceland.
Magro, Salvatore J. (47)
111 Avenue N, Brooklyn 30, N. Y.
Maguire, Edward H. (48)
420 E. 20th St., Baltimore 18, Md.
Mahan, Robert J. (48)
20 Dorinda Circle, Lynn 1, Mass.
Maher, Donald T. (49)
420 N. Highland Ave., Pittsburgh 6, Pa.
Maher, Frank T. (46)
808 S. Wood St., Chicago 12, Ill.
Mahler, Arthur (43)
6419 Park Ave., West New York, N. J.
Mahler, William H. (46)
124 W. Park Ave., Elmhurst, Ill.
Mahnke, Allen (49)
P. O. Box 902, Fond du Lac, Wis.
Mahoney, Robert Wm. (48)
Rt. 1, Council Bluffs, Iowa.
Maida, Frank V. (49)
130 Quarry St., Mt. Pleasant, Pa.
Maier, Ted F. (43)
78 E. 3d St., Winona, Minn.
Main, Edgar H. (45)
2 Exchange St., Millis, Mass.
Main, James K. (46)
220 Princeton Ave., Hubbard, Ohio.
Main, R. D. (45)
5202 Riverview Dr., Indianapolis 8, Ind.
Maisel, Carl (29)
152 Highland Ave., Montclair, N. J.
Maitland, John B. (45)
520 Allen St., Springfield, Mass.
Maizel, Solomon (46)
493 E. 24th St., Paterson 4, N. J.
Majeske, J. P. (45)
220 G St., Millville, N. J.
Majorich, Charles S. (46)
383 Charles S. E., Warren, Ohio.
Maldonado, Juan J. (45)
School of Pharmacy, Chemistry Bldg., Univ. of Wisconsin, Madison, Wis.
Male, Francis E. (47)
572 Lakeview Ave., San Francisco 12, Calif.
Maletta, Lorenzo J. (48)
3120 Holbrook, Hamtramck 12, Mich.
Maley, Asa R. (46)
Fox Drug, Sayre, Okla.
Maling, Gertrude (47)
612 Cornelia, Chicago 13, Ill.
Malinske, Joseph J. (47)
833 E. Locust St., Milwaukee 12, Wis.
Malis, Bernard (44)
1608 Sparks St., Philadelphia 41, Pa.
MALLARD, ALBERT E. (07)
3021 Wabash Ave., Detroit, Mich.
Malloy, Charles M. (49)
211 Ulysses St., Pittsburgh 11, Pa.
Malloy, G. C. (48)
c/o Spaulding & Malloy, 320 E. Hillcrest Blvd., Inglewood, Calif.
Malloy, Marshall J. (48)
2214 W. 3rd St., Los Angeles 5, Calif.
Malmo, A. L. (39)
Medical Arts Bldg., Duluth, Minn.
Malmon, Max (45)
3446 N. 45th St., Milwaukee 10, Wis.
Malone, James F. (36)
193 Fellows Ct., Elmhurst, Ill.
Malone, Paul E. (44)
Box 183, Grafton, W. Va.
Maloney, Edward J. (47)
4322 O'Bear Ave., St. Louis 7, Mo.
Maloney, Mary A. (47)
204 S. Church, Princeton, Ill.
Malouf, Nicholas T. (48)
41 Cowing St., West Roxbury 32, Mass.
Malowan, Lawrence S. (37)
P. O. Box 14, Panama City, Panama.
Malpass, George N. (47)
5 Wells St., Saratoga Springs, N. Y.
Malspeis, Louis (45)
727 E. 23rd St., Paterson, N. J.
Malusky, Marjorie L. (44)
9520 Eureka Pkwy., Parma Heights 9, Ohio.
Malvin, Leonard (47)
3311 Juliet St., Pittsburgh 13, Pa.
Mamakos, Nicholas (48)
1320 National Rd., Wheeling, W. Va.
Mameli, Angelo (45)
946—44th St., Brooklyn 19, N. Y.
Mameli, Efisio (49)
Via Marzola 5, Padova, Italy.
Manchester, Earl N. (36)
Library, Ohio State Univ., Columbus, Ohio.
Manchey, L. Lavan (31)
c/o Henry K. Wampole & Co., 440 Fairmont Ave., Philadelphia 23, Pa.
Manco, Ezron (49)
148 Grant Ave., Bellevue, Pa.
Mancuso, Joseph S. (45)
1055—53rd St., Brooklyn 19, N. Y.
Mancuso, Salvatore (44)
Paramount Drug Co., 233 Montgomery St., Montgomery, Ala.
Mandelbaum, Alvin J. (46)
275 Linden Blvd., Brooklyn 26, N. Y.
Mandell, Hyman J. (47)
1175 Portland Ave., Rochester 5, N. Y.
Mandell, Marvin S. (47)
162 Fimora, Elizabeth 2, N. J.
Manderson, George W. (45)
1946 W. 6th St., Davenport, Iowa.
Mandes, Luigi M. R. (43)
101 W. Caracas Ave., Hershey, Pa.
Mandler, Fred S. (47)
1934 Murdoch St., Pittsburgh 17, Pa.
Maney, Paul V. (37)
400 First St., S. E., Cedar Rapids, Iowa.
Mang, Herbert J. (39)
135 S. Alexander St., New Orleans 19, La.
Manhardt, Edwin B. (47)
Sayner, Wis.
Maniates, Louis G. (43)
4737 (rear) W. North Ave., Chicago 39, Ill.
Mankowski, Alexander N. (48)
7533 W. Becher St., West Allis 14, Wis.
Manley, Bruce L. (47)
413—4th St., Donora, Pa.
Manlove, Richard O. (48)
Route 2, Shirley, Ind.
Manna, Louis (49)
Prefab House, 112 Court F, W. State St., West Lafayette, Ind.

**Mansing, Dan W. (46)**
Richfield, Utah.
**Mannino, Frank N. (47)**
1262 Romona Ave., Lakewood 7, Ohio.
**Mannino, Joseph A. (46)**
220 Monroe Ave., River Edge, N. J.
**Mannino, Rosario J. (46)**
80 W. Main St., Bogota, N. J.
**Mansfield, Robert J. (40)**
8A Chauncy St., Cambridge 38, Mass.
**MANSFIELD, WILLIAM (07)**
371 Kenwood Ave., Delmar, N. Y.
**Manson, Alfred P. (44)**
347 Water St., Gardiner, Me.
**Manuel, James E. (47)**
Standard Drug Co., Dyersburg, Tenn.
**Manvel, Lucy M. (45)**
42 Third St., Troy, N. Y.
**Manwarring, Arthur E. (48)**
903 Third Ave., Salt Lake City 3, Utah.
**Manzelli, Thomas A. (48)**
319 N. 63rd St., Philadelphia, Pa.
**Manziano, James (47)**
171 Jackson Ave., Jersey City 5, N. J.
**Manzione, Rosetta L. (47)**
983 Washington Blvd., Pittsburgh, Pa.
**Mapel, Jack E. (49)**
1014 Ligonier St., Latrobe, Pa.
**Mapes, Robert H. (49)**
241 W. Findlay St., Carey, Ohio.
**Mar, Josephine M. (44)**
1029 D. St., Fresno, Calif.
**Marabella, Leo (49)**
339 Massachusetts Ave., Buffalo 13, N. Y.
**Marano, Ross J. (33)**
850 Cranford Ave., New York 66, N. Y.
**Marasigan, Petronila C. (46)**
Dept. of Botany, University of the Philippines, Quezon City, P. I.
**Maraziti, Edward W. (46)**
718 Main St., Boonton, N. J.
**Marchbanks, Iliff C. (47)**
Cookeville, Tenn.
**Marchek, Carlyle S. (48)**
Fitzsimons General Hospital, Denver, Colo.
**Marchiano, Oscar (48)**
201—48th St., Union City, N. J.
**Marchlewski, Leonard J. (48)**
515 N. Main St., Union City, Conn.
**Marcinkiewicz, Josephine (47)**
66 Harlem St., Worcester, Mass.
**Marcovich, Paul (47)**
4101 Euclid Ave., East Chicago, Ind.
**Marcucci, Paul S. (44)**
165 Inverness Dr., San Francisco 16, Calif.
**Marcum, Lynn D. (48)**
2258—11th Ave., Sacramento 18, Calif.
**Marcus, Arnold D. (49)**
College of Pharmacy, Drake University, Des Moines 11, Iowa.
**Marcus, Raymond S. (49)**
5528 Jackson St., Pittsburgh 6, Pa.
**Mardarello, Benjamin (49)**
215 Maple St., Weehawken, N. J.
**Marders, Miles L., Jr. (46)**
P. O. Box 50, Oroville, Calif.
**Marek, Ervin B. (47)**
3624 W. Cermak Rd., Chicago, Ill.
**Marenberg, Leonard S. (46)**
3163½ Summit St., Toledo 11, Ohio.
**Maresh, Stanford S. (42)**
Box 213, Michigan City, Ind.
**Marfell, Elizabeth J. (44)**
916 E. 15th St., Minneapolis 4, Minn.
**Margerum, Donald C. (19)**
42 Beacon Ave., Ferguson 21, Mo.
**Margolin, Leon (46)**
9301 Long Beach Blvd., South Gate, Calif.
**Margolis, Arthur G. (49)**
1627 Dudley Ave., Utica, N. Y.
**Margolis, Charles (47)**
630 Avenue U, Brooklyn 23, N. Y.
**Margotta, Anna (49)**
Odell Court, New Rochelle, N. Y.
**Margulies, Calvin (49)**
1—S. E.28 th Ave., Portland, Oreg.
**Margulies, Harry P. (46)**
2438 Lemoine Ave., Coytesville, N. J.

**Marincik, Stanley R. (47)**
235 Alameda, San Anselmo, Calif.
**Marini, Orlando (49)**
1707—5th Ave., Arnold, Pa.
**Marker, Charles W. (49)**
811 N. E. First St., Fort Lauderdale, Fla.
**Market, Harold L. (46)**
601 S. Seminary St., Princeton, Ind.
**Markgraf, Edwin (44)**
P. O. Box 828, Rockford, Ill.
**Markowitz, Bernard A. (45)**
859 Westgate Ave., St. Louis 5, Mo.
**Markowitz, Edgar (49)**
1402 Louise, Munhall, Pa.
**Marks, Jack (48)**
429 Broadway, Camden, N. J.
**Marks, John E. (47)**
1502 N. 21st St., Richmond 23, Va.
**Marks, Morris S. (48)**
68 E. 86th St., New York 22, N. Y.
**Marks, Ralph A. (48)**
1346 Curtis St., Berkeley 2, Calif.
**Marks, Seymour (47)**
1055 Carlyon Rd., East Cleveland 12, Ohio.
**Marks, William J. (44)**
1174 W. First Ave., Columbus 8, Ohio.
**Markunas, Jean T. (48)**
1037 W. York St., Philadelphia 33, Pa.
**Markuze, Abraham L. (49)**
3142 Buena Vista Terrace, S. E., Washington 20, D. C.
**Markwich, Jean R. (48)**
9715 Paramount Blvd., Downey, Calif.
**Marley, Joseph M. (46)**
4505 E. 30th St., Indianapolis, Ind.
**Marmor, Joseph P. (48)**
18 S. Market St., Frederick, Md.
**Marotta, Frank G. (44)**
107 East Ave., Lockport, N. Y.
**Marquand, Helene (45)**
3811 Memphis Ave., Cleveland 9, Ohio.
**Marquand, R. W. (39)**
3811 Memphis Ave., Cleveland 9, Ohio.
**Marquardt, Oswald C. (47)**
5300 W. Burleigh St., Milwaukee 10, Wis.
**Marquet, Arthur H. (48)**
224 Main St., Keansburg, N. J.
**Marquez, Antonio F. (45)**
De Diego No. 201, P. O. Box 473, Rio Piedras, Puerto Rico.
**Marquez, Olga (43)**
San Lozaro #352 Esquina, San Nicolas, Havana, Cuba.
**MARQUIER, ADOLPH F. (09)**
1041 S. Orange Ave., Newark, N. J.
**Marquis, Charles R. (49)**
626 W. First St., Maryville, Mo.
**Marquis, Margaret (49)**
10 E. Dayton, West Alexandria, Ohio.
**Marr, Max B. (47)**
19 W. Main, Walla Walla, Wash.
**Marriott, Thomas C. (46)**
1217 W. Fifth St., Coffeyville, Kans.
**Marron, Claude L. (43)**
Fayette, Miss.
**Marschall, John C. (47)**
16 First St., N. W., Hampton, Iowa.
**Marsden, George W. (44)**
4438 Germantown Ave., Philadelphia 44, Pa.
**Marshall, Alton L. F., Jr. (46)**
17 Villa St., Waltham, Mass.
**Marshall, Alton L. F., Sr. (49)**
45 Lexington St., Watertown, Mass.
**Marshall, Donald E. (47)**
9566 Sanilac St., Detroit 24, Mich.
**Marshall, Earl H. (46)**
Troy, Tenn.
**Marshall, Harold W. (42)**
1111 Main St., Delano, Calif.
**Marshall, Isadore M. (48)**
18638 Parkland Dr., Cleveland (Shaker) 20, Ohio.
**Marshall, James L. (46)**
1221 S. Center St., Springfield, Ohio.
**Marshall, John A. (47)**
c/o Anglo Canadian Drug Co., Ltd., Oshawa, Ont., Canada.
**Marshall, Leo E. (49)**
1889 Ivanohoe Court, Louisville, Ky.

**Marshall, Lillian (47)**
192-03 Union Turnpike, Flushing N. Y.
**Marshall, Monty (45)**
2905 Fourth St., Hampton, Va.
**Marshall, Perry F., Sr. (49)**
1222 Cypress, Louisville 11, Ky.
**Marshall, Richard E. (47)**
Urbanna, Va.
**Marshall, Russell W. (47)**
920 Henry St., Moberly, Mo.
**Marshall, Thomas E. (46)**
354 Daisy Ave., Long Beach 2, Calif.
**Marshall, Thomas F., Jr. (45)**
Bank St., Urbanna, Va.
**Martens, Heinrich (33)**
1232 Michigan Ave., Sheboygan, Wis.
**Martens, Seymour (49)**
143 Montgomery St., Poughkeepsie, N. Y.
**Martin, Andrew P. (27)**
Congress & Church Sts., Tucson, Ariz.
**Martin, Andrew R. (47)**
5107 Cavedo Lane, Richmond 23 Va.
**Martin, Charles F. (41)**
Route #1, Pullman, Wash.
**Martin, Ellwood T., Jr. (49)**
203 E. Eleventh Ave., Conshohocken, Pa.
**Martin, Eric W. (45)**
4400 Spruce St., Apt. E-25, Philadelphia 4, Pa.
**Martin, Florence L. (48)**
846 W. Santa Barbara, Los Angeles 37, Calif.
**Martin, Frank W. (47)**
311 Baker Ave., Webster Groves 19, Mo.
**Martin, George I. (44)**
Martin & Dalton, Tallahassee, Fla.
**Martin, Guy D., Jr. (46)**
203 N. Main St., Greenville, Ky.
**Martin, H. H. (48)**
4315 W. Vliet, Milwaukee 9, Wis.
**Martin, Harriet J. (49)**
13001 Beachwood Ave., Cleveland, Ohio.
**Martin, Jerome (44)**
c/o Library, 1331 S. 1st St., Terre Haute, Ind.
**Martin, John F. (48)**
1311 Philippine St., Manitowoc, Wis.
**Martin, John W. (46)**
Macclesfield, N. C.
**Martin, John W., Jr. (47)**
Carrboro, N. C.
**Martin, Lawell F. (47)**
St. Stephen, S. C.
**Martin, Marilyn E. (46)**
2830—30th Ave. S., Seattle 44 Wash.
**Martin, Paul C. (47)**
403 N. George Mason Dr., Arlington, Va.
**Martin, Richard L. (49)**
332 Hillcrest Dr., John Day, Oreg.
**Martin, Robert (49)**
7070 Collins Ave., Miami Beach 41, Fla.
**Martin, Robert P. (47)**
Thayer, Mo.
**Martin, Roger I. (45)**
Purvis, Miss.
**Martin, William B. (48)**
104 Culver St., Macon, Ga.
**Martin, William B. (49)**
2865 Liberty Ave., Ogden, Utah.
**Martin, William F. (48)**
11 Sycamore Ter., Somerville, Mass.
**Martinez, Charles A. (46)**
Gretna Pharmacy, Gretna, La.
**Martinez, Irisbelia M. (49)**
Box 641, Rio Piedras, Puerto Rico.
**Martinez, Silda R. (49)**
Jose J. Acosta No. 20, Vega Baja, Puerto Rico.
**Martinez-Roig, Francisco E. (47)**
Box 476, Cayey, Puerto Rico.
**Martini, Emil P. (34)**
37 Linden St., Hackensack, N. J.
**Martini, Rudolph (40)**
P. O. Box 369, Southampton, L. I., N. Y.
**Marusco, Francis M. (47)**
2400 Market St., Wilmington 246, Del.
**Marx, Lawrence L. (46)**
Third & Dewey, Bartlesville, Okla.

Mas, Jaime S. (26)
304 Ocean Dr., Miami Beach 39, Fla.
Masci, Frank J. (46)
319—88th St., Brooklyn, N. Y.
Masci, Joseph N. (49)
Johnson & Johnson, New Brunswick, N. J.
Mascieri, George A. (46)
2507 So. Alder St., Philadelphia 48, Pa.
Mason, Carroll L. (46)
608 S. W. Alder, Portland 5, Oreg.
MASON, DAVID J. (34)
102-05 Metropolitan Ave., Forest Hills, N. Y.
Mason, Donald W. (48)
316 W. Race St., Martinsburg, W. Va.
Mason, Floyd R. (48)
1300 S. Via Francisca, Los Angeles 33, Calif.
Mason, James B. (44)
1502 North Gale, Indianapolis 1, Ind.
Mason, Walter C., Jr. (46)
518 Roy Ave., Dayton, Ohio.
Mason, Walter C. (48)
S. Main St., LaFayette, Ga.
Massa, Dominick G. (45)
84 Leighton Ave., Yonkers 5, N. Y.
Massa, Rose M. (44)
8722 Glenwood Rd., Brooklyn 12, N. Y.
Massey, Jack E. (48)
907 S. W. 23rd Ave., Miami 35, Fla.
Massey, Jim (40)
Hahira, Ga.
Massi, John J. (46)
2115½ Norwood St., Los Angeles 7, Calif.
Massis, Louis (49)
3322 E. 119th St., Cincinnati 10, Ohio.
Massman, Fred T. (44)
2602 Maplewood Ave., Toledo 10 Ohio.
Massó-Portilla, Felix J. (46)
153 San Jose St., Box 2418, San Juan 11, Puerto Rico.
Masterbone, Joseph A. (47)
98 Main St., Bristol, Conn.
Masterson, Conrad J. (47)
230 N. W. 16, Oklahoma City, Okla.
Masterson, Leo T. (46)
813 S. Chapel, Louisville, Ohio.
Masterson, Ray L. (49)
1043½ Market St., Parkersburg, W. Va.
Mastoras, Alcibiades (46)
2455 Union St., Apt. 203, San Francisco 23, Calif.
Mateer, Elwood G., Jr. (43)
303 College Ave., Ashland, Va.
Matheke, Frank H. (41)
117 Renshaw Ave., East Orange, N. J.
Matheny, Robert H. (48)
Box 705, Lewisburg, W. Va.
Mather, Claude A. (23)
c/o City Drug Store Inc., 324 Grant Ave., Eveleth, Minn.
Mather, Lewis O. (48)
2356 Third Ave., San Diego 1, Calif.
Mathers, Audrey J. (46)
Hymera, Ind.
Mathes, Vernon W. (49)
1265 Vincennes St., New Albany, Ind.
Mathew, Carey H. (46)
201 S. Jameson, Lima, Ohio.
Mathews, Samuel K. (46)
1707—4th Ave., Los Angeles 6, Calif.
Matousek, C. Anthony (47)
7127 Harvard Ave., Cleveland 5, Ohio.
Matousek, Joseph T. (38)
10100 Euclid, Shaker Heights, Ohio.
Matson, J. Glen (47)
1370 S. Monroe St., Denver 10, Colo.
Matsumoto, Grace T. (47)
3924 Westminster, St. Louis 8, Mo.
Matsushima, Sueko (45)
c/o Sunami, 27 W. 15th St., New York 11, N. Y.
Matsuura, Perry S. (46)
2070 Clinton Ave., Alameda, Calif.
Matt, Louis C. (49)
123 Boyce Ave., Utica 3, N. Y.

Matteis, Vincent M. (35)
243-17—134 Ave., Rosedale, L. I., N. Y.
Matter, Robert W. (49)
1755 Springfield Ave., Maplewood, N. J.
Mattern, Richard H. (49)
4614 E. Willock Rd., Pittsburgh 27, Pa.
Matthes, Joseph D. (44)
20 Lee St., Jamaica Plain 30, Mass.
Matteucci, Orlando D. (46)
2530 Middletown Rd., Pittsburgh 5, Pa.
Matthews, A. W. (45)
68 Broadview Ave., Toronto 8, Ont., Canada.
Matthews, Mary J. (49)
227 C. St., Rock Springs, Wyo.
Mattichak, David (49)
Lopez, Pa.
Mattikow, Morris (47)
98 Riverside Dr., New York, N. Y.
Mattingley, Victor L. (46)
c/o Box 1110 Decatur, Ill.
Mattison, K. C. (43)
4200 E. 34th St., Minneapolis, Minn.
Mattocks, Albert M. (45)
1663 Roberts Lane, Falls Church, Va.
MATUSOW, HARRY (97)
3236 W. Norris St., Philadelphia, Pa.
Mau, H. Shin (46)
881 Hotel St., Honolulu 13, Hawaii.
Maultsby, Imogene (47)
804 Highland Ave., Austin 21, Tex.
Maurer, Paul R. (49)
680 N. Western Ave., Wooster, Ohio.
Maurina, F. A. (49)
Parke, Davis & Co., Detroit 32, Mich.
Maus, Wilma K. (43)
132 E. Graham Ave., Council Bluffs, Iowa.
Maust, Jonas G. (49)
1916 E. Washington Lane, Philadelphia 38, Pa.
Mauterer, John V. (47)
2324 Frenchman St., New Orleans 19, La.
Maxson, Edgar W. (49)
775 Lakeview Ave., S., St. Petersburg, Fla.
Maxwell, C. D. (44)
641 Delaware Ave., Dayton 5, Ohio.
Maxwell, David L. (28)
1801 I St., N. W., Washington, D. C.
May, Martha (47)
W. Main St., Ravenna, Ky.
Mayer, A. M. (47)
3335 Dolfield Ave., Baltimore 15, Md.
Mayer, Frank J. (46)
243 N. Main St., Mansfield, Ohio.
Mayer, Harry F. (46)
5537—6th Ave., Kenosha, Wis.
Mayer, Henry A. (44)
885 S. Robert St., St. Paul 7, Minn.
Mayer, John J. (49)
Port Jervis, N. Y.
Mayers, James C. (29)
301 E. Girard Ave., Philadelphia, Pa.
Mayhew, Ernest E. (46)
Fincastle, Va.
Maynard, Edmond L. (43)
15 Crittenden St., Springfield, Mass.
Mayo, Edward D. (37)
c/o The Upjohn Co., Kalamazoo, Mich.
Mays, Lee R. (49)
2001 Gatewood, Oklahoma City, Okla.
Mazanek, Arthur (47)
622 E. 20th St., New York 9, N. Y.
Mazel, George (45)
P. O. Box 132, Chelsea 50, Mass.
Mazer, Jack (46)
172 Newark Ave., Jersey City 2, N. J.
Mazilauskas, Edward T. (40)
1148 Third Ave., New York, N. Y.
Mazlish, Abraham (49)
7 Bergen Court, Bayonne, N. J.
Mazliah, David J. (44)
119 Ocean Ave., Jersey City, N. J.

Mazzara, Alexander R. (47)
349 Grove St., Brooklyn 27, N. Y.
Mazzoni, Dominick J. (49)
2720 Grand Concourse, Bronx 58, N. Y.
Mazzucca, Anthony J. (49)
64 Fallbrook St., Carbondale, Pa.
McAdams, Harold (47)
68 W. Main St., Clinton, N. J.
McAfee, Frederick L. (49)
Berea, Ky.
McAllister, L. C. (44)
201 E. Chestnut St., Lancaster, Pa.
McAllister, Wallis, K. (47)
9213 Wade Park Ave., Cleveland 6, Ohio.
McAloon, J. T. (45)
c/o E. R. Squibb & Son, 427 W. Randolph St., Chicago 6, Ill.
McArthur, Everette A. (34)
c/o Parke, Davis & Co., Detroit, Mich.
McAuliffe, Henry L. (45)
1 Union St., Lynn, Mass.
McAuliffe, Philip J. (46)
Box 63, Lynn, Mass.
McBay, Arthur J. (47)
Mass. College of Pharmacy, 179 Longwood Ave., Boston 15, Mass.
McCain, Garland E. (47)
242 S. Pauline St., Memphis, Tenn.
McCain, Taylor K. (43)
6342 Vicland Place, North Hollywood, Calif.
McCall, Philip J. (46)
1425 W. 42nd St., Chicago, Ill.
McCall, William C. (49)
Oak Ridge Rd., Pine Castle, Fla.
McCallister, Raymond W., Jr. (47)
925 N. Third, Quincy, Ill.
McCallum, Archie H. (47)
201 Spring St., Peoria, Ill.
McCandless, John P. (49)
5701 Kingsessing Ave., Philadelphia 43, Pa.
McCandless, Ronald R. (49)
138 W. Jefferson St., Butler, Pa.
McCann, Derwent Wm. (49)
c/0 Holmes, 502 W. 24th St., New York, N. Y.
McCann, George E. (47)
77 P St., N. E., Washington 2, D. C.
McCann, George M. (41)
1511 Center Blvd., Springfield, Ohio.
McCann, Jerome A. (47)
1513 S. Center Blvd., Springfield, Ohio.
McCarter, Harold W. (47)
4121 E. Minnesota St., Indianapolis 3, Ind.
McCarthy, Charles D. (39)
162 Castle St., Geneva, N. Y.
McCarthy, Daniel F. (49)
c/o Payless Drug Store, 304 S. Maine, Pendleton, Oreg.
McCarthy, Daniel V. (44)
150 Franklin St., San Francisco, Calif.
McCarthy, Edward W. (46)
232 N. Buckeye St., Wooster, Ohio.
McCarthy, George W. (45)
215 S. Capitol, Iowa City, Iowa.
McCarthy, John C. (47)
306—2nd Nat'l Bank Bldg., Cincinnati 2, Ohio.
McCarthy, Walter C. (50)
College of Pharmacy, Univ. of Washington, Seattle 5, Wash.
MCCARTNEY, FRANK L. (07)
Lauderdale Beach Hotel, Fort Lauderdale, Fla.
McCartney, William E. (47)
Box 560, Eureka, Kans.
McCaslin, Murray F. (49)
626 Union Trust Bldg., Pittsburgh 19, Pa.
McCausland, Harlouen (29)
332 Douglas Ave., Waukegan, Ill.
McClain, Dorothy S. (45)
6015—24th Ave., N. W., Seattle 7, Wash.
McClard, Billie W. (47)
Lafayette, Tenn.
McClarty, Hamilton (48)
1220 Southdown Rd., Hillsborough San Mateo P. O., Calif.
McClatchey, W. Riley (48)
2406 St. Clair, Pueblo, Colo.
McClave, Charles H. (49)
Rainelle, W. Va.

McClellan, Earny B. (46)
1342—19th St., Santa Monica, Calif.
McClelland, John R. (36)
46 Swarthmore St., Hamden 14, Conn.
McClelland, Thomas E. (49)
17 W. Pacific Ave., Forest Grove, Oreg.
McClenahan, William S. (46)
% Mellon Institute, 4400 Fifth Ave., Pittsburgh 13, Pa.
McClintock, Chester W. (40)
2019 Andover Rd., Columbus, Ohio.
McCloskey, Charles J. (16)
Culver Lake, Branchville, N. J.
McCloskey, John F. (34)
2935 Calhoun St., New Orleans, La.
McClung, Golda J. (48)
Carl, W. Va.
McClure, E. M. (48)
522 Colorado Ave., Louisville 8, Ky.
McClure, John W. (46)
7135 Ferguson Rd., Rt. 4, Box 78-A, Dallas 10, Tex.
McClusky, D. O., Jr. (44)
Druid City Hospital, Tuscaloosa, Ala.
McCoach, William (46)
601 Station Ave., Haddon Heights, N. J.
McCollum, Arnold J. (46)
710 N. Irving St., Greenville, Mich.
McCollum, Charles J. (47)
442 Burnley Lane, Drexel Hill, Pa.
McConnell, Campbell C. (48)
2541 Marion St., Denver 5, Colo.
McConnell, Edward R., Jr. (45)
15840 Ward, Detroit 27, Mich.
McCool, E. T. (45)
120 W. 4th, Joplin, Mo.
McCormick, Arthur J. (45)
122 S. Broadway, Lawrence, Mass.
McCormick, Charles E. (25)
3402 Cedardale Rd., Baltimore 15, Md.
McCormick, James H. (47)
24 Greenwood Ave., Battle Creek, Mich.
McCormick, John F. (47)
34 Sunset Ave., North Providence, R. I.
McCormick, Kirk W. (46)
Box 397, Jazoo City, Miss.
McCormick, M. K. (49)
946 Caledonia St., Butte, Mont.
McCosh, Theo H. (44)
1799—12th St., Gering, Nebr.
McCowan, James R. (49)
2400 Water St., Apt. A, Boulder, Colo.
McCracken, Oscar V. (46)
9534 Maple Ave., Bellflower, Calif.
McCrackin, A. W. (49)
432—5th St., Traverse City, Mich.
McCrary, Joe (44)
c/o McCrary Drug Co., 1525 N. Central Ave., Phoenix, Ariz.
McCrillis, W. G. (40)
87 Main St., Plymouth, N. H.
McCue, Helen D. (42)
1913 Crafton Blvd., Crafton, Pa.
McCue, Ralph (45)
1945 Crafton Blvd., Crafton, Pa.
McCullough, Max H. (49)
2400 S. W. 16th Court, Miami 33, Fla.
McCullough, Robert D. (49)
1331 Thayer Ave., Ashtabula, Ohio.
McCullough, William P. (44)
2211 E. 52nd St., Apt. 18, Indianapolis, Ind.
McCurdy, Walter (46)
c/o L. M. Smythe, R. F. D. 1, Mitchell, S. Dak.
McCutchan, Virgil R. (45)
653—22nd St., San Pedro, Calif.
McCutcheon, Robert (47)
55 N. 27th St., Corvallis, Oreg.
McDaniel, James F. (49)
Manchester, Ky.
McDaniel, Mary I. (47)
749 S. Grant, Denver, Colo.
McDaniel, Max A. (46)
4715 Rockwell Ave., Chicago, Ill.
McDermaid, Richard (49)
Army Medical Depot, 12th & Spruce St., St. Louis, Mo.
McDermott, Charles B. (49)
1019 Elliott St., W., Windsor, Ont., Canada.
McDermott, Fay H. (47)
2508 Benvenue Ave., Berkeley 4, Calif.
McDermott, Pat J. (45)
9 Main St., East Pepperell, Mass.
McDermott, William E. (47)
757 East St., Pittsburg, Calif.
McDonald, Ted K. (47)
2960-A N. 60th St., Milwaukee 10, Wis.
McDonnell, John N. (37)
Lindsay Lane, Meadowbrook, Pa.
McDonnell, Joseph F., Jr. (27)
274 Harvard Ave., Rockville Centre, L. I., N. Y.
McDonough, Patricia L. (45)
625—17th Ave., Santa Cruz, Calif.
McDougall, C. E. (48)
3401 N. Bend Rd., Cincinnati 24, Ohio.
McDowell, Keith W. (44)
109 Prospect, St. Johns, Mich.
McDowell, N. O. (44)
104 N. Main, Scotland Neck, N. C.
McDowell, Ruth K. (39)
2833 W. 25th St., Cleveland 13, Ohio.
McDuffie, Roger A. (40)
304 Florence St., Greensboro, N. C.
McElroy, W. H. (47)
142 Clemmer Ave., Akron 2, Ohio.
McEvilla, Joseph D. (47)
1425 Mervin Ave., Dormont, Pittsburgh 16, Pa.
McEwan, Gloria A. (46)
3062 Alexander Blvd., Windsor, Ontario, Canada.
McFadyen, Dwight S. (46)
235 Bennett Ave., Long Beach 3, Calif.
McFall, Bryan C. (48)
1628 A St., N. E., Washington 2, D. C.
McFall, Robert H. (47)
129 Westmoreland Court, Danville, Va.
McFarland, Miles F. (46)
215 S. Burgess Ave., Columbus 4, Ohio.
McGath, Ed. (40)
c/o St. Mary's Hospital, Huntington 2, W. Va.
McGettrick, A. F. (44)
24 Dorr, Roxbury 19, Mass.
McGhee, Charles S. (49)
McGhee's Pharmacy, Rucker & Hewitt, Everett, Wash.
McGinity, F. Rowland (41)
3039 Eastern Avenue, Baltimore, Md.
McGinnis, Thomas R. (47)
3006 Gallatin Rd., Nashville 6, Tenn.
McGoldrick, James J. (45)
3915 MacArthur Blvd., Oakland 2, Calif.
McGrath, Kenneth L. (49)
Woodburn, Oreg.
McGrath, Warren J. (48)
5703 Bellvedere St., Houston 4, Tex.
McGraw, James W. (39)
c/o James McGraw's Pharmacy, 1530 Market St., Redding, Calif.
McGraw, Robert F. (49)
Clark Hotel, New Kensington, Pa.
McGrew, R. P. (49)
3518 E. Burnside, Portland 15, Oreg.
McGrew, Richard J. (49)
3840 N. E. Couch, Portland 15, Oreg.
McGuire, John L. (49)
423 South, Toledo 9, Ohio.
McGwan, Norah M. (46)
Royal Victoria Hospital, Montreal, Que., Canada.
McHaffie, John H. (48)
1310 Milvia St., Berkeley 9, Calif.
McHale, Charles E. (47)
1210 Masonic Temple, New Orleans, La.
McHugh, Ernest (49)
1430 D, Lincoln, Nebr.
McHugh, John R. (47)
1022 Second St., Morgan City, La.
McIntyre, W. L. (46)
Gunnison, Utah.
McIssac, Robert J. (46)
108 Oxford Ave., Buffalo 9, N. Y.
McKallor, Edgar M. (49)
187-191 Water St., Binghamton, N. Y.
McKay, Robert G. (47)
4387a Laclede Ave., Apt. 6, St. Louis 8, Mo.
McKee, Fred E. (49)
3301 Detroit Ave., Toledo 10, Ohio.
McKee, Ruth M. (47)
Forest Hill Pharmacy, 13235 Superior at Euclid, East Cleveland, Ohio.
McKeighan, John J. (41)
1801 N. Saginaw St., Flint, Mich.
McKellar, Claude A. (46)
Ephrata, Wash.
McKenna, Warren (49)
2602½ Havanna St., New Orleans 19, La.
McKenna, William C., Jr. (27)
705 Linnard St., Baltimore, Md.
McKenney, Frank R. (15)
4 Potter St., Brunswick, Me.
McKenzie, Donald R. (43)
2231 College Ave., Berkeley 4, Calif.
McKesson, Donald (06)
99 N. 11th St., Brooklyn, N. Y.
McKibbin, Charles F. (46)
12400 Washington Blvd., Venice, Calif.
McKim, Orville, E. (46)
425 Boston Post Rd., Port Chester, N. Y.
McKinley, James D., Jr. (46)
Pharmacy Dept., Johns Hopkins Hosp., Baltimore 5, Md.
McKinley, William C. (44)
1093 W. First Ave., Columbus 8, Ohio.
McKinney, Frederick M. (48)
Box 2533, Cristobal, Canal Zone.
McKinney, Robert H. (46)
The Cudahy Packing Co., Omaha 7, Nebr.
McKnight, Claude L. (43)
P. O. Box 247, Ceres, Calif.
McKnight, Frances E. (46)
1403 S. Main, Hopkinsville, Ky.
McKnight, Thomas E. (46)
2721 Indiana St., South Gate, Calif.
McLaughlin, E. R. (49)
2002—10th Ave. S., St. Cloud, Minn.
McLaughlin, Guy W., Jr. (46)
5201 Akron St., Philadelphia 24, Pa.
McLaughlin, Harold A. (49)
412 South Ave., Whitman, Mass.
McLaughlin, John J. (37)
416 River St., Paterson, N. J.
McLean, Walter, Jr. (46)
3657 Fairwoods Dr., Baton Rouge, La.
McLeod, R. W. (44)
14715 Detroit Ave., Lakewood, Ohio.
McLymont, J. V. (49)
1404 B Ave., Douglas, Ariz.
McMahan, Herbert D. (46)
Box I, Belton, S. C.
McMahon, James H. (47)
111 Kingsly Rd., Oak Ridge, Tenn.
McMahon, Richard F. (48)
2632 O, Lincoln, Nebr.
McManus, E. (45)
Box 893, La Grande, Oreg.
McMeans, Fayette W. (46)
1534—3rd Ave., S. E., Cedar Rapids, Iowa.
McMillan, R. H. (49)
3001—16th N., St. Petersburg 6, Fla.
McMillin, George L. (44)
Greenfield Ave. & Coleman St., Pittsburgh, Pa.
McMillin, George L., Jr. (46)
214 Marylea St., Pittsburgh 27, Pa.
McMullen, Marion H. (47)
Albright & Wood, Mobile, Ala.
McNally, John Leonard (42)
3509 Beford, Detroit, Mich.
McNamara, Jack W. (45)
Walter Reed General Hospital, Washington, D. C.
McNamee, Harold R., Jr. (47)
2602 N. E. 33rd Ave., Portland 13, Oreg.
McNeal, Marguerite E. (43)
R. F. D. 3, Bucyrus, Ohio.
McNeal, Mary A. (43)
R. F. D. 3, Bucyrus, Ohio.
McNeil, Elva B. (49)
561 W. Iroquois Rd., Pontiac, Mich.
McNeil, R. Lincoln (39)
2900 N. 17th St., Philadelphia, Pa.

McNeil, Robert L., Jr. (39)
8917 Crefeld St., Philadelphia 18, Pa.
McNeill, William H. (44)
240 Godwin Ave., Midland Park, N. J.
McNelis, Patrick D. (48)
94 Old River Road, Wilkes-Barre, Pa.
McNess, Frederick P. (38)
Furst—McNess Co., Freeport, Ill.
McNew, Robert L. (46)
S. Cherokee St., LaFayette, Ga.
McNierney, Henry D. (40)
2820 Ditmars Blvd., Long Island City 5, N. Y.
McNulty, William J., Jr. (39)
Box 986, Sparta, N. J.
McOmie, William A. (47)
2464 Mill Creek Rd., Mentone, Calif.
McPheeters, H. Clay (47)
679 S. National, Springfield, Mo.
McPherrin, John Weitz (43)
572 Madison Ave., New York, N. Y.
McPherson, Clifford H. (46)
304 Vine St., Monongahela, Pa.
McPike, Cyrus W. (46)
1804—3rd Ave., Rock Island, Ill.
McQueary, William T. (47)
902 E. Madison, Springfield, Mo.
McQuillen, Edward F. (49)
817 Clay St., Manchester, N. H.
McQuillen, Patrick H. (43)
793—2nd Ave., Upland, Calif.
McRae, Melvin C. (46)
1415 Pacific Ave., Santa Cruz, Calif.
McRae, Winfield S. (49)
6 E. Grand St., Berea, Ohio.
McShane, John B. (49)
Bentley Ave., Poultney, Vt.
McShane, Julian J., Jr. (49)
1249 Granville Ave., Chicago, Ill.
McShane, Kenneth (47)
402 Broadway, Monett, Mo.
McShane, Owen W. (48)
Main & Depot Sts., Poultney, Vt.
McTernan, Walter F., Jr. (47)
471 Bernard St., East Meadow, L. I., N. Y.
McVay, Francis L. (47)
207 Second St., Cochran, Ga.
McVay, G. Birch (47)
Cochran, Ga.
McVey, Virginia F. (47)
505 N. 26th St., #407, Milwaukee 3, Wis.
McWilliams, H. B. (45)
1207 S. Vermont Ave., Los Angeles 6, Calif.
McWilliams, Mary C. (45)
3707 Woodland Ave., Philadelphia 4, Pa.
McWilliams, Maury (46)
Prattville, 1, Ala.
Mead, Pierre D. Sr. (47)
2243 Huron St., Klamath Falls, Oreg.
Mead, Robert W. (49)
Burwell, Nebr.
Meadows, A. B. (49)
P. O. Box 516, Gauley Bridge, W. Va.
Meadows, Russell (47)
Box 1199, Bisbee, Ariz.
Meads, Curtis L. (46)
302—157th St., Calumet City, Ill.
Meagher, Leo F. (48)
417 Delia, Flint, Mich.
Meals, George W. (47)
c/o Dr. George Echol, Milledgeville, Ga.
Means, Earl A. (18)
630 Fifth Ave., New York, N. Y.
Means, Emmett C. (49)
800 W. McNichols, Detroit 24, Mich.
Means, W. E. (41)
33 E. Main St., Carnegie, Pa.
Mear, J. F. (49)
103 S. 4th, Martins Ferry, Ohio.
Meaux, Mahlen M. (47)
417 N. Irving Ave., Kaplan, La.
Mechenich, A. G. (46)
5932 W. Burnham, West Allis 14, Wis.
Medford, Catherine H. (46)
Charity Hospital, 6th Floor, New Orleans, La.
Medici, Paul T. (47)
89-14 89 St., Woodhaven, N. Y. 21, N. Y.
Medina, Jose W. (48)
206 Allen St., Box 1012, San Juan 5, Puerto Rico.
Medina, Virginia G. (49)
1111 Laguna, San Francisco, Calif.
Meece, Roger M. (46)
c/o Livingston Drug Co., Livingston, Tex.
Meehan, Edward M. (47)
4814 Baltimore Ave., Philadelphia 43, Pa.
Meek, Fred (46)
3347 S. E. Belmont St., Portland 15, Oreg.
Megahee, Thomas G. (47)
Megahee's Pharmacy, Norman Park, Ga.
Mehlman, Esther (49)
51 Geneva St., Highland Park 3, Mich.
Mehr, Clara A. (46)
740 E. State St., Sharon, Pa.
Mehra, Bal Krishan (47)
3931 Pine St., Rm. 5, Philadelphia 4, Pa.
Mehring, Edwin J. (46)
219 E. St. Catherine, Louisville, Ky.
Mehring, Vivian M. (49)
912 N. Vermilion St., Danville, Ill.
Meier, Paul F. W. (47)
2647 N. 21st St., Milwaukee 6, Wis.
Meigs, Jamie L. (44)
Centerville, Ala.
Meininger, Julius (46)
6074 E. 9th St., Indianapolis 19, Ind.
Meinke, Calvin L. (49)
403 Howard St., Findlay, Ohio.
Meirose, Herman J. (46)
648 E. Epworth Ave., Cincinnati 32, Ohio.
Meisel, Fred B. (48)
513—9th Ave., Prospect Park, Pa.
Meiselas, Edwyn (48)
835 E. 46th St., Brooklyn 3, N. Y.
Meiser, E. Taylor (48)
Bridgeway Pharmacy, Chesapeake Ave. & 6th St., Eastport, Md.
Meisler, Isadore (43)
177 Weequahis Ave., Newark 8, N. J.
Meislich, John L. (47)
6821—4th Ave., Brooklyn 20, N. Y.
Meissner, Roger M. (45)
105 Franklin Ct., LaPorte, Ind.
Melchers, Louis A., Jr. (47)
1106 King St., Charleston 26, S. C.
Meldner, Carl F. (44)
2933 S. 17th, Tacoma 6, Wash.
Melfi, Joseph F. (47)
c/o Tupper Pharmacy, Inc., Summerville, S. C.
Melkon, Bernard (48)
1427 Crittenden St., N. W., Washington, D. C.
Mellan, Ibert, (44)
34-34 Corp. Kennedy St., Bayside, N. Y.
Mellen, Morris (42)
18639 Wisconsin, Detroit 21, Mich.
Mellick, Edna A. (45)
Albia, Iowa.
Mellon, Charles A. (38)
182 Koster Row, Eggertsville 21, N. Y.
Melmon, A. T. (45)
450 Sutter St., c/o Broemmel's Pharmacy, San Francisco, Calif.
Melstrom, Earl H. (48)
216 Genesee St., Iron River, Mich.
Melton, H. E. (39)
12020 Rosemary Ave., Detroit, Mich.
Melville, Daniel M. (49)
519 Sidney St., Greensburg, Pa.
Melvin, James E. (42)
1970 Montrose Ave., Chicago, Ill.
Melvin, M. B. (44)
Box 545, Raleigh, N. C.
Membert, James A. (45)
1421 Highland Dr., Silver Spring, Md.
Memoli, E. R. (45)
4363 Grace Ave., Bronx 66, N. Y.
Menachof, Allen J. (46)
1401 S. Smithville Rd., Dayton 10, Ohio.
Menagh, Charles E. (47)
290 Park Ave., Rutherford, N. J.
Menczel, Efraim (43)
?? Herzel St., Tel-Aviv, Israel.
Mende, William C. (46)
Old Amwell Rd., Neshanic, N. J.
Mendel, J. (47)
1037 Madison Ave., New York 21, N. Y.
Mendel, Philip A. (47)
c/o Groshong Rexall Drugs, 446 Main, Marseilles, Ill.
Mendel, Sigo R. (42)
P. O. Box 713, Savannah, Ga.
Mendell, Hyman L. (46)
3 E. Kingsbridge Rd., New York 58, N. Y.
Mendelsohn, Simon (48)
608 E. Epworth Ave., Cincinnati 32, Ohio.
Mendenhall, Norman R. (49)
7548 Warner Ave., Richmond Heights 17, Mo.
Mendez, José, Jr. (45)
Box 1286, Ponce, Puerto Rico.
Mendez, Lumen M. (49)
Commerce St., Lares, Puerto Rico.
Mendez, Rafael A. (45)
Mendez Lab. of America, Box 4609, San Juan, Puerto Rico.
Mendonse, J. C. (42)
4279 S. Harvard St., Los Angeles 37, Calif.
Menke, Hugo L. (37)
384 Post St., San Francisco, Calif.
Menn, Benjamin W. (30)
16 S. Mayfield Ave., Chicago 44, Ill.
Mennella, Richard L. (46)
225 W. 232nd St., New York 63, N. Y.
Mennen, Wm. G. (36)
345 Central Ave., Newark 4, N. J.
Menotti, Amel R. (44)
c/o Cheplin Biol. Lab., Inc., Box 657, Syracuse 1, N. Y.
Menzie, Hazel M. (45)
Strong Memorial Hosp. Pharmacy, 260 Crittenden Blvd., Rochester 7, N. Y.
Mercer, Frank L. (38)
3709 Viking St., Le May 23, Mo.
Merchant, Eugene E., Jr. (46)
P. O. Box 709, Winston Salem, N. C.
Merchant, S. H. (45)
c/o Custom House, Calcutta, India.
Merck, George W. (26)
Lincoln Ave., Rahway, N. J.
Merdian, Charles F. (46)
Henry, Ill.
Meredith, D. T. (39)
403 Fairfax St., Kalamazoo 56, Mich.
Meriano, Constantine N. (42)
65A Pinckney St., Boston 14, Mass.
Merkin, Harry J. (49)
2370 Main, Hartford, Conn.
Merrell, Charles G. (88)
305 Edgewater Dr., Dunedin, Fla.
Merrell, Thurston (45)
c/o Wm. S. Merrell Co., Cincinnati 15, Ohio.
Merrick, Gale D. (49)
420 N. Main St., South Bend, Ind.
Merrick, James B. (45)
31 Cricket Ave., Ardmore, Pa.
Merrigan, Frank M. (45)
49 Union St., Easthampton, Mass.
Merrill, Edward C. (15)
Rexall Drug Co., 43 Leon St., Boston 15, Mass.
Merriman, William D. (49)
2114 Norton Rd., Charlotte, N. C.
Mersky, Milton E. (49)
5808 Penn Ave., Pittsburgh 6, Pa.
Mervis, Maurice (46)
1500 Seventh Ave., Beaver Falls, Pa.
Merz, August (36)
333 S. Harrison St., East Orange, N. J.
Merz, William C. (46)
Route 10, Whippany, N. J.
Mesirow, Albert (47)
1900 K St., N. W., Washington 6, D. C.
Messenger, Woodrow V. (48)
c/o Woods Pharmacy, Oak Hill, W. Va.
Messer, Edward J. (47)
923 E. 23rd St., Des Moines, Iowa.
Messner, Patricia Ann (47)
604 Hickory, Anaconda, Mont.
Mest, Gerard S. (49)
1601 Chew St., Allentown, Pa.
Mestayer, Felix C. (47)
151 W. Main St., New Iberia, La.
Metcalfe, C. Wendy (48)
1163 San Carlos Ave., San Carlos, Calif.
Meteny, Frank (49)
1002 Chestnut Ave., Trenton, N. J.

Metz, Glenn, L. (39)
125 Embert Pl., Peoria 4, Ill.
METZGER, ARTHUR S. (08)
Malden, Mo.
Metziner, Jim P. (48)
Box 83, Phippsburg, Colo.
Meuser, Edwin N. (46)
West China Union Univ., Department of Pharmacy, Chengtu, Szechwan, China.
Mewborn, A. L. (46)
2351 E. Evans Ave., Denver, Colo.
Meyer, A. J. (37)
1020 Bishop Rd., Grosse Pointe, Detroit, Mich.
Meyer, A. W., Jr. (29)
c/o Meyer Drug Co., 78 S. King St., Honolulu, T. H.
Meyer, Albert C. (43)
552 Riverside Dr., Apt. 4B, New York 27, N. Y.
Meyer, Albert G., Jr. (48)
6339 Hammel Ave., Cincinnati 12, Ohio.
Meyer, Carl H. (49)
407–408 Bankers Trust Bldg., Des Moines 9, Iowa.
Meyer, E. Crawford (43)
Rte. 2, Watterson Trail, Jeffersontown, Ky.
Meyer, E. Walter (47)
Gary, Ill.
Meyer, Erich (39)
88 Lexington Ave., New York, N. Y.
Meyer, Fred H. (48)
15432 Del Gado, Sherman Oaks, Calif.
Meyer, Harold C. (48)
2816 W. Diversey Ave., Chicago 47, Ill.
Meyer, Herman (45)
116–23 Jamaica Ave., Richmond Hill, N. Y.
Meyer, Howard J. (46)
3022 N. Main St., Dayton 5, Ohio.
Meyer, John H. (45)
1813 Washington St., Two Rivers, Wis.
Meyer, Joseph (44)
6702B—186th Lane, Apt. 1A, Flushing, N. Y.
Meyer, Joseph E. (27)
Box 5, Hammond, Ind.
Meyer, Malcolm M. (47)
234 S. Spruce St., Lititz, Pa.
Meyer, Minnie M. (38)
c/o Southern College of Pharmacy, 223 Walton St., N. W., Atlanta 3, Ga.
Meyer, Roy P. (45)
540 W. Randolph St., Chicago 11
Meyers, Don B. (44)
College of Pharmacy, State Univ. of Iowa, Iowa City, Iowa.
Meyers, Floyd P. (49)
245 LaFayette, Council Bluffs, Iowa.
Meyers, Norbert B. (47)
158–14 Oak Ave., Flushing, L. I., N. Y.
Meyers, Samuel (46)
5753 Pine St., Philadelphia 43, Pa.
Meyerson, Bernard (34)
c/o Associated Laboratories, Inc., 880 Broadway, New York 3, N. Y.
Mezentsoff, Anatole A. (48)
808 S. 11th Ave., Nampa, Idaho.
Miale, Joseph P. (45)
c/o Walker Vitamin Products, Inc., 17 S. Columbus Ave., Mt. Vernon, N. Y.
Michael, John E. (46)
P. O. Box 30, Swarthmore, Pa.
Michael, Oliver W. (47)
4318 Penrose, St. Louis 15, Mo.
Michaels, Milton (47)
445—12th Ave., Paterson 4, N. J.
Michels, Charles F. (48)
Wood St., West Union, W. Va.
Michels, Frank J. (45)
370 Genesee, Buffalo 4, N. Y.
Michener, N. Lindley (39)
60 N. Bolton Ave., Indianapolis, Ind.
Mick, Charles J. (44)
2112 Indianola, Columbus 1, Ohio.
Mickey, Florence C. (45)
10614 Englewood, Cleveland 8, Ohio.
Middlekauff, H. P. (46)
31 N. Potomac, Hagerstown, Md.
Middleton, E. E. (46)
Box 488, Selah, Wash.
Middleton, Leon E. (46)
Middleton's Drug Store, Greenfield, Ill.
Mieding, Carl E. (44)
7 S. State, Girard, Ohio.
Mierswa, Richard D. (47)
518—73rd St., Kenosha, Wis.
Miess, Ray (37)
1800 N. Farwell Ave., Milwaukee 2, Wis.
Miesse, Russell H. (44)
1686 E. Main St., Columbus, Ohio.
Miessler, Walter L. (47)
1602 S. Pierce, Little Rock, Ark.
Miga, Andrew (42)
Box V, Greensboro, N. C.
Migdall, Jacob (42)
5927 Atlantic Ave., Long Beach 5, Calif.
Mignacca, Basil J. (47)
780 Pontiac Ave., Cranston, R. I.
Mihalek, Florence M. (49)
5115 Ira Ave., Cleveland 9, Ohio.
Mikhitarian, Albert, (45)
19 Thompson St., Catskill, N. Y.
MIKKELSEN, NIELS (03)
Kenesaw, Nebr.
Mikolz, Stanley (45)
132 S. Highland Ave., Pittsburgh, Pa.
Milano, Vincent (49)
122 Crawford Ave., Pittsburgh 2, Pa.
Milbrandt, Albert L. (40)
191 Douglas Ave., Elgin, Ill.
Milenky, Pauline (49)
39 Prospect St., Waterbury 2, Conn.
Miles, Charles (39)
Ames Co. Inc., Box 636, Elkhart, Ind.
Miles, Glen W. (47)
264 S. Pearl, Denver 9, Colo.
Miles, James W. (47)
7233 Susquehanna St., Pittsburgh 8, Pa.
Mill, Ralph J. (43)
625 Mullett St., Detroit 26, Mich.
Mill, Thomas C. (49)
117 E. Vine St., Mt. Vernon, Ohio.
Millar, Charles D. (47)
c/o Millar Drug Co., 106 W. Main St., Grand Prairie, Tex.
Millard, Frank, Jr. (47)
17545 Snowden Ave., Detroit 21, Mich.
Millard, James H. (44)
800 Broadway, McKees Rocks, Pa.
Miller, A. A. (43)
305 Ocean Pkwy., Brooklyn 18, N. Y.
Miller, Abraham (46)
4170 S. Drexel Blvd., Chicago 15, Ill.
MILLER, ALBERT (07)
623 Fullerton Pkwy., Chicago, Ill.
Miller, Anna I. (45)
152 South St., Pittsfield, Mass.
Miller, Bert W. (44)
Miller Drug Co., Boone, Iowa.
Miller, Blaine (46)
159 N. Santa Fe, Salina, Kans.
Miller, Brother Hugh (46)
Oshkosh, Wis.
Miller, Mrs. C. B. (39)
824 Kansas Ave., Topeka, Kans.
Miller, C. Martin (47)
Laurens Drug Co., Laurens, S. C.
Miller, C. O. (39)
4830 N. Oakland Ave., Milwaukee 11, Wis.
Miller, C. Orville (44)
6209 Lisbon Ave., Cincinnati 13, Ohio.
Miller, Carl H. (47)
1932—4th Ave., Sacramento 14, Calif.
Miller, Charles D. (49)
73 Bull St., Charleston 10, S. C.
Miller, Charles E. (47)
616 Indiana St., Vallejo, Calif.
MILLER, CHARLES E. (99)
1403 E. Lewis St., Fort Wayne, Ind.
Miller, Charles E. (47)
Idaho & Main, Wendell, Idaho.
Miller, Charles W. (49)
1800 S. 17th Ave., Maywood, Ill.
Miller, Clarence W. (46)
25910 Benton Ave., Cleveland 23, Ohio.
Miller, Clifton E. (36)
1313—3rd St., N., Fargo, N. Dak.
Miller, Constance P. (47)
73 Bull St., Charleston 10, S. C.
Miller, David (49)
410 Rittenhouse St., N. W., Washington, D. C.
Miller, David (46)
1432 Rockaway Pkwy., Brooklyn 12, N. Y.
Miller, Dorothyann (46)
442 Mears, Chadron, Nebr.
Miller, Edith M. (43)
Athens State Hospital, Athens, Ohio.
Miller, Ernest Y. (45)
136 Woodside Village, Apt. 3C, Stamford, Conn.
Miller, Faye L. (44)
535 E. Bertsch St., Lansford, Pa.
MILLER, FRANK C. (49)
1505 Dixie Highway, Louisville 16, Ky.
Miller, Galer J. (46)
618—4th St., N. E., Hampton, Iowa.
Miller, George (48)
Strong Cobb & Co., Inc., 2654 Lisbon Rd., Cleveland 4, Ohio.
Miller, George L. (47)
298 Belmont Ave., Springfield 8, Mass.
Miller, Gwen V. (41)
c/o Mills Drug, Rapid City, S. Dak.
Miller, Harold V. (49)
539 E. Wash St., Mount Pleasant, Pa.
Miller, Harry (46)
905 Columbus Ave., Bay City, Mich.
Miller, Harvey S. (49)
315 N. Utica St., Waukegan, Ill.
Miller, Henry C. (46)
Eli Lilly and Co., Indianapolis 6, Ind.
Miller, Hugo H. (49)
1018 Superior St., Tomah, Wis.
Miller, John B., Jr. (49)
325 W. Main St., Monongahela, Pa.
Miller, John F. (47)
7726 Brashear St., Wilkinsburg, Pa.
Miller, John F. (38)
222 Riverside Dr., Irving Arms Apt. 61E, New York, N. Y.
Miller, Lawrence J. (46)
1815 Lincoln Way, White Oak Boro, McKeesport, Pa.
Miller, Lloyd C. (40)
1 Normanside Ave., Delmar, N. Y.
Miller, Nancy B. (45)
Washington Lane, Ambler, R. D., Pa.
Miller, Ned B. (45)
1133 Brown St., Dayton 9, Ohio.
Miller, Nicholas S. (42)
13 W. Main, Milan, Mich.
Miller, Orville H. (47)
4732—48th Ave., N. E., Seattle 5, Wash.
Miller, Otis J. (46)
1033 Camp St., Sandusky, Ohio.
Miller, Patricia A. (47)
14 Lenox Ave., Forest Hills 21, Pa.
Miller, Ralph L. (46)
1725 Poyntz Ave., Manhattan, Kans.
Miller, Robert A. (49)
147 Chambers St., Newburgh, N. Y.
Miller, Robert F. (46)
2501 N. 36th St., Milwaukee 10, Wis.
Miller, Robert H. (49)
College of Pharmacy, Univ. of Minnesota, Minneapolis, Minn.
Miller, Robert W. (47)
1122 Monticello Rd., Napa, Calif.
Miller, Russell A. (47)
19th and Paxton Sts., Harrisburg, Pa.
Miller, Sidney (46)
1214 N. State St., Appleton, Wis.
Miller, Susie N. (49)
113 W. 24th St., Vancouver, Wash.
Miller, William W. (43)
4132 Cooke St., Duluth 4, Minn.
MILLIKAN, F. FORD (38)
121 Cherokee Ave., Athens, Ga.
Milliken, Augusta (47)
508½ N. Spaulding Ave., Los Angeles 36, Calif.
Milliman, George E. (43)
315 Highbridge, Fayetteville, N. Y.

Millis, Archie E. (46)
Apt. 101, Woodside Manor, 2102 Dexter Ave., Silver Spring, Md.
Millman, Julian D. (46)
5324 Tilden Ave., Brooklyn 3, N. Y.
Millman, Philip H. (47)
1737 Ruxton Ave., Baltimore 16, Md.
Millner, Nathan (49)
807 Avenue A, Bayonne, N. J.
Mills, George K. (48)
130 Bayfield, Washburn, Wis.
Mills, Harold W. (46)
714 Franklin, Rapid City, S. Dak.
Millspaugh, Giles W., Jr. (49)
809—4th St., Natchitoches, La.
Milne, Alexander M. (48)
28 Woodhaven Blvd., Bethesda 14, Md.
Milner, Louis (36)
4400 Chestnut St., Philadelphia, Pa.
Milstein, Morris (44)
440 Troy Ave., Brooklyn, N. Y.
Mimms, Milton V. (49)
117 S. Perry, Lawrenceville, Ga.
Mindel, Leonard (49)
10 Morse St., Dorchester 21, Mass.
Miner, Donald E. (48)
1724 Erie St., Racine, Wis.
Minkin, Hyman N. (44)
6030 Cates Ave., St. Louis, Mo.
Minnich, Llywellan E. F. (43)
501 W. Market, York, Pa.
Minore, Sam (47)
8721 Van Dyke, Detroit 13, Mich.
Mir, Frank, (46)
1235 K St., Sacramento 3, Calif.
Mirabile, Joseph (49)
894 Belmont Ave., Brooklyn 8, N. Y.
Miraglia, John A. (48)
663 Palisade Ave., Cliffside Park, N. J.
Miranda, Neftali (45)
P. O. Box 66, Morovis, Puerto Rico.
Miskinis, Alphonse M. (42)
116 Ames St., Brockton 39, Mass.
Misura, Leon J. (47)
18638 Filer Ave., Detroit 34, Mich.
Mitchell, Charles M., Jr. (46)
215 Canterbury Rd., Havertown, Pa.
Mitchell, Ernest A. (46)
977 E. 55th St., Los Angeles 11, Calif.
Mitchell, J. D. (45)
The Globe Drug Store, Tuscumbia, Ala.
Mitchell, John S. (39)
Freedman's Hospital, Washington, D. C.
Mitchell, Joseph (49)
367 Moon Dr., Akron, Ohio.
Mitchell, Nicholas W. (49)
105 Garden St., Fall River, Mass.
Mitchell, R. M. (46)
123 W. Solomon, Griffin, Ga.
Mitchum, Margaret R. (47)
Erin, Tenn.
Mitchum, Norma A. (47)
Waverly, Tenn.
Mittelstaedt, Stanley G. (47)
School of Pharmacy, Univ. of Texas, Austin, Tex.
Mittuch, J. W. (46)
61 Roosevelt, Carteret, N. J.
Mixter, Robert W. (44)
c/o Mixter's Pharmacy, Exeter, Calif.
Miya, Midori (49)
FPHA 427-1 Airport Rd., West Lafayette, Ind.
Mize, Ralph A. (46)
7343—29th Ave., S. W., Seattle 6, Wash.
Mobilio, Joseph N. (45)
1500 S. Broad St., Philadelphia 46, Pa.
Mochizuki, Yosh (44)
718 Minnewawa Ave., Fresno, Calif.
Mock, Hugo (36)
10 E. 40th St., New York, N. Y.
Moehle, Charles F. (49)
106 N. Silver St., Olney, Ill.
Moen, Henry M. (46)
2639 University Ave., St. Paul 4, Minn.
Moffatt, Stanton N. (49)
1592 Crawford Rd., Cleveland, Ohio.
Moffitt, Walter J. (43)
4483—42nd St., San Diego 5, Calif.
Mogol, Fred (49)
2903 Potomac Ave., Los Angeles 16, Calif.
Mogol, Sidney (48)
2903 Potomac Ave., Los Angeles 16, Calif.
Mogull, Edward (46)
1260 Main St., Bridgeport 3, Conn.
Moin, Arthur C. (47)
1022 Tower Ave., Superior, Wis.
Moll, Russell O. (47)
601 N. 9th St., Reading, Pa.
Mollands, Stanley J. (48)
Taos, N. Mex.
MOLLETT, C. E. F. (09)
436 Keith Ave., Missoula, Mont.
Molofsky, Nathan (46)
211 E. 200th St., Bronx, N. Y.
Molyneux, Paul (41)
417 Dauphin St., Mobile, Ala.
Monaco, Anthony J. (47)
650 South St., Steubenville, Ohio.
Monaco, Frances R. (49)
224 Wegman Pkwy., Jersey City 5, N. J.
Monaco, James R. (44)
807 South St., Steubenville, Ohio.
Monahan, Ashley L. (46)
621 N. Manhattan Ave., Manhattan, Kans.
Moncheski, Louis J. (47)
1221 Clinton St., St. Louis 6, Mo.
Mongeau, Paul (46)
222 Main, Indian Orchard, Mass.
Mongin, Arthur H., Jr. (47)
313 W. 11th St., Kaukauna, Wis.
Monroe, Harry T. (45)
300 Central Ave., Dunkirk, N. Y.
Monserrate-Anselmi, A. L. (43)
Box 322, Rio Piedras, Puerto Rico.
Monson, Reinhart I. (49)
805 El Camino Real, Mountain View, Calif.
Montcalm, Theodore (45)
164 Main St., Indian Orchard, Mass.
Monte, Robert P. (49)
1104 Walnut Rd., S. E., Massillon, Ohio.
Monte-Bovi, Anthony J. (37)
Rm. 503 Chem. Dept., 96 Schermerhorn St., Brooklyn, N. Y.
Montecuollo, Arnoldo E. (48)
97 St. Pauls Ave., Jersey City 6, N. J.
Monteleone, Ernest J. (46)
383 Ocean Ave., Jersey City 5, N. J.
Montesinos A., Fernando (47)
1429 Rhode Island Ave., N. W., Washington 5, D. C.
Montgomery, Harry E. (46)
1748 Youngstown Rd., Warren, Ohio.
Montgomery, John A. (47)
Route 1, Box 77A, Siluria, Ala.
Montgomery, Ray E. (49)
132 Broad St., Central City, Ky.
Montgomery, William B. (46)
313 S. Pitt St., Mercer, Pa.
Montiel, Henry (48)
1522 W. Selby Lane, Redwood City, Calif.
Monts, Joseph, Jr. (46)
Clinic Drug, Americus, Ga.
Monyak, Dorothy V. (45)
405 Main St., West Aliquippa, Pa.
Monzon, Louis B. (43)
Apartado Postal #143, Ciudad de Guatemala, Guatemala, C. A.
Moodie, Furman B. (49)
P. O. Box 73, Indian Rocks, Fla.
Moody, Henry S. (49)
101 W. Reynolds St., Plant City, Fla.
Moody, Willey M. (40)
123 S. 3rd, San Jose, Calif.
Moores, Clyde C. (46)
Oak St. Box A, Brentwood, Calif.
Mooney, William J. (44)
Box 1616, Indianapolis 6, Ind.
Mooney, Wm. P. (47)
2192 S. 60th St., West Allis, Wis.
Moore, A. Maurice, Jr. (42)
Dept. of Purchase, Rm. 1918, Municipal Bldg., New York 7, N. Y.
MOORE, ALEXANDER B. J. (14)
Delawanna, N. J.
Moore, Arthur W. (44)
22 Elm Ave., Pitman, N. J.
Moore, Banks M. (41)
c/o Eastport Pharmacy, Main St., Eastport, L. I., N. Y.
Moore, Betty (48)
1102 Central Row, Erlanger, Ky.
Moore, Edmond E. (48)
Abbott Laboratories, North Chicago, Ill.
Moore, Frank G. (44)
15 Bessemer Rd., Welwyn Garden City, Hertsfordshire, England.
Moore, Fred W. (29)
24 N. San Francisco St., Flagstaff, Ariz.
Moore, George H. (49)
201 N. State, Caro, Mich.
Moore, Ivan M. (45)
1025 Southgate St., Victoria, B. C., Canada.
Moore, Jack (49)
230 Hogan St., Jacksonville 2, Fla.
Moore, James C. (46)
246 Bowdoin St., Dorchester, Mass.
Moore, James W. (49)
500 Broadway, Bismarck, N. Dak.
Moore, James Winston (47)
32 Nonantum St., Brighton 35, Mass.
Moore, Janet F. (49)
24 S. Main St., Manchester, N. H.
Moore, Joseph S. (45)
475 S. Diamond St., Mansfield, Ohio.
Moore, Marjorie B. (34)
Abbott Laboratories, North Chicago, Ill.
Moore, Maurice L. (44)
Smith, Kline & French Labs., 1530 Spring Garden St., Philadelphia 1, Pa.
Moore, Milton A. (46)
301 Main, Tarboro, N. C.
Moore, Paul (49)
83 Hamilton St., Worcester 4, Mass.
Moore, Russell W. (45)
Box 199, El Paso, Tex.
Moore, Samuel L. (49)
194 Roswell St., Akron, Ohio.
Moore, Vernon R. (48)
912 Liberty St., Meadville, Pa.
Moore, Willis E. (46)
969 W. Church, Newark, Ohio.
Moore, Z. O. (46)
601 Barton Ave., Chattanooga 5, Tenn.
Moosbrugger, Otto (37)
672 N. Main St., Dayton 5, Ohio.
Moosnick, Bernard S. (47)
346 W. 26th St., New York 1, N. Y.
Mootry, Earl H. (44)
1999 N. Capitol, Salem, Oreg.
Morais, Camille (49)
632 Merrimack St., Lowell, Mass.
Morales, C. Garcia (38)
Maximo Comez, 414, Altos, Havana, Cuba.
Moran, J. J. (42)
Landis Ave. & Spring Rd., Vineland, N. J.
Moran, John M. (48)
Ralston, Pa.
Moran, Joseph P. (48)
Rm. 418, State Capitol, Hartford, Conn.
Moran, R. J. (45)
6 Colonial Dr., Arlington, Mass.
Moravec, Daniel F. (49)
1342 Grove Ave., Crete, Nebr.
MORDELL, J. SOLON (31)
921 Butternut St., N. W., Washington 12, D. C.
Mordis, Robert R. (49)
854 E. 4th St., South Boston, Mass.
Moreau, Albert C. (46)
2223 Chestnut St., Philadelphia 3, Pa.
Morelli, Ralph C. (48)
127 Long Hill Rd., Waterbury 44, Conn.
Morelly, Charles P. (46)
556 E. 40th St., Brooklyn 3, N. Y.
Moreno, Alfredo A., Jr. (46)
c/o Ballard Drug Store, Kenedy, Tex.
Morgan, A. Dee (49)
3405 N. E. Pacific, Portland 13, Oreg.
Morgan, Fannie R. (48)
111 N. Redfield St., Philadelphia 39, Pa.
Morgan, Frederic H., Jr. (47)
3809 Hawthorne Ave., Richmond 22, Va.
Morgan, James I. (47)
8819 North Ave., St. Louis 21, Mo.

Morgan, Mary E. (44)
919 Baughman St., Akron, Ohio.
Morgan, Mary H. (39)
1005 N. 12th, Boise, Idaho.
Morgan, Wm. F. (36)
Baldwin's Garden Apts., Bldg. 11, B-1, Baldwin, N. Y.
Morgenroth, Victor H., Jr. (49)
1855 Powell Pl., Jacksonville 5, Fla.
Morgenthaler, Albert F. (38)
159 Forrest Ave., N. E., Atlanta, Ga.
Morgey, Russell W. (42)
1045—8th St., Boulder, Colo.
Morgovsky, Bert S. (46)
165 Shrewsbury Ave., Red Bank 6, N. J.
Mori, Mary T. (44)
Bethesda Hospital, Oak & Reading Rd., Cincinnati 6, Ohio.
Morian, John P. (47)
4935 Gresham Ave., St. Louis 9, Mo.
Morin, Albert P. (47)
Walhalla, N. Dak.
Morin, Alexis Z. (24)
Walhalla, N. Dak.
Morin, Robert L. (39)
56 Main St., Danielson, Conn.
Morita, Sue (46)
962 Jones St., San Francisco 9, Calif.
Moriyasu, Akira D. (46)
Kahului, Maui, T. H.
Morley, Mrs. Richard (43)
235 W. 23rd St., Holland, Mich.
Morra, Ernest (24)
259 Stuyvesant Ave., Brooklyn 21, N. Y.
Morrell, C. A. (32)
Dept. of National Health & Welfare, Food & Drugs Division, 35 John St., Ottawa, Ont., Canada.
Morris, D. W. (41)
423 Commercial St., Emporia, Kans.
Morris, Floyd H. (47)
c/o Morris Drug Store, Arapahoe, Nebr.
Morris, Franklin L. (47)
531 N. Orchard Dr., Burbank, Calif.
Morris, Hewin V. (48)
Hartwell, Ga.
Morris, Jack (49)
6126 Hoeveler, St., Pittsburgh 6, Pa.
Morris, Jack A. (49)
530 Arbutus Ave., Nanaimo, B. C., Canada.
Morris, John A. (46)
236 E. Bennett St., Compton, Calif.
Morris, Joy H. (48)
400—1st Ave., Parkesburg, Pa.
Morris, Kenneth R. (45)
Skaggs Pay Less Drug Stores, 710 K Street, Sacramento, Calif.
Morris, Mrs. Robert H. (46)
6 Broad, Canfield, Ohio.
Morris, Ruth E. (43)
Immanuel Hospital, 34th & Fowler Ave., Omaha, Nebr.
Morris, S. Kyle (47)
121 E. South, Kalamazoo 5, Mich.
Morris, William H. (48)
307 W. Gramercy, San Antonio, Tex.
Morrison, A. Wm. (48)
793 N. W. 44th St., Miami 37, Fla.
Morrison, Everett G. (42)
989 Main St., Santa Paula, Calif.
Morrison, Finlay A. (48)
5902 Clement Rd., Vancouver, B. C., Canada.
Morrison, James R. (46)
6113 Ridge Ave., Philadelphia 28, Pa.
Morrison, Leland W. (45)
Mechanic St., Canaan, N. H.
Morrison, Robert S. (45)
Box 542, Lebanon, Pa.
Morrison, Robert W. (39)
3447 Coleman St., Columbia, S. C.
MORRISON, SHERMAN W. (22)
856 Washington Blvd., Oak Park, Ill.
Morriss, Rex G. (47)
P. O. Box 621, Salina, Kans.
Morrissey, John J. (39)
329 Park St., Lawrence, Mass.
Morrow, Donald L. (46)
132½ W. 10th St., Concordia, Kans.
Morrow, Harry P. (48)
424 Ridgecrest Rd., N. E., Atlanta, Ga.
Morrow, Leonard E. (47)
1445 Oak St., Apt. 110, Oakland 12, Calif.
Morse, Samuel (46)
39 Whitney St., Closter, N. J.
Mortensen, Harry A. (44)
8 Park St., New Lisbon, Wis.
Mortensen, Mark M. (46)
P. O. Box A, Gustine, Calif.
Mortenson, Arthur J. (47)
c/o Paulson's Pharmacy, Fairmont, Minn.
Mortus, Charles S. (48)
555 Flynn, Redwood City, Calif.
Morwessel, Donald C. (48)
507 Garrard St., Covington, Ky.
Mosbaugh, Harry A. (46)
1497 Maple Ave., Noblesville, Ind.
Mosby, R. Ray (40)
2515 Chestnut Ave., Newport News, Va.
Moscati, Marius (46)
455 Langley Rd., Edgewater Apts., Baltimore 21, Md.
Moscoso, Enrique I. (40)
Box 1789, Ponce, Puerto Rico.
Moscoso, Jose G. (45)
Plaza Degetau, Ponce, Puerto Rico.
Moseley, Barbara H. (47)
Ninety Six, S. C.
Moseley, Thomas Q. (46)
Box 298, Ennis, Tex.
Moshinsky, Leonard (45)
453 Jelliff Ave., Newark, N. J.
Moskey, Thomas A., Jr. (40)
2101 N. Glebe Rd., Apt. 101, Arlington, Va.
Moskowitz, Belle H. (42)
2750 Sturtevant, Detroit 6, Mich.
Moskowitz, Louis J. (48)
469 Monroe Ave., Rochester 7, N. Y.
Moskowitz, Ralph (47)
2118 Robert St., New Orleans 15, La.
Mosler, Thomas A. (41)
112 Forest Hill Rd., West Orange, N. J.
Mosqueda, Alejandro (48)
Avenida Principal del Cementerio 34, Caracas, Venezuela, S. A.
Moss, Charles J. (48)
520—45th St., San Diego 2, Calif.
Moss, Jack (45)
622 Alabama St., Vallejo, Calif.
Moss, Saul (47)
1260 Lexington Ave., New York 28, N. Y.
Mossman, Leo W. (43)
608 First Ave., Gallipolis, Ohio.
Mote, Harold (47)
Acworth, Ga.
Motley, Anderson B., Jr. (47)
Box 205, Chatham, Va.
Motley, Emery T. (20)
711 Bull St., Columbia, S. C.
Motley, Robert W. (49)
2896 Forbes St., Jacksonville 5, Fla.
Motoasca, George (46)
72 Woodlands Ave., R. F. D., White Plains, N. Y.
Mottar, John A. (46)
206 N. Main St., Edwardsville, Ill.
Mottar, William D., Jr. (47)
109 W. Vandalia, Edwardsville, Ill.
Mouat, Gordon A. (43)
2332 Garrett Ave., Baltimore, Md.
Moudry, F. W. (35)
5th & St. Peter Sts., St. Paul, Minn.
MOULTON, GEO. A. (36)
49 Main St., Peterborough, N. H.
Mounger, Marshall (46)
3105 Gary Dr., St. Louis 20, Mo.
Mowell, Laverne J. (41)
Murdo, S. Dak.
Moyer, Earl M., Jr. (48)
3194 Meredith Ave., Omaha 11, Nebr.
Moyer, Ella L. (47)
Germantown Hospital, Philadelphia 44, Pa.
Moyer, Raymond J. (46)
Burmont & Morgan Ave., Drexel Hill, Pa.
Moyer, William C. (47)
424 W. 20th, Norfolk, Va.
Mozer, Nathan L. (42)
1593 Grape St., Denver 7, Colo.
Mrazek, Leo L. (46)
c/o Carleton Hotel, 1110 Pleasant St., Oak Park, Ill.
Mrazek, Rudolph G. (47)
4309 Cermak Rd., Chicago 23, Ill.
Mroczka, Joseph J. (47)
124 Giffin Ave., Pittsburgh 10, Pa.
Mroczynski, Gertrude H. (44)
577 Oliver St., North Tonawanda, N. Y.
Mross, Dolores (47)
3459 N. Cramer St., Milwaukee, Wis.
Mrox, Ed. J. (48)
1504 S. Lincoln Ave., Spokane, Wash.
Mudd, Francis P. (49)
c/o Mr. B. L. Goodwin, Paris Pike, Rt. 3, Lexington, Ky.
Mudgett, Paul E. (47)
592 Main, Fortuna, Calif.
Mudter, George E. (47)
Manchester, Ga.
Muehlbauer, Tony J. (46)
3076 N. 13th St., Milwaukee 6, Wis.
Muehlhause, Otto W. (40)
4943 Belair Rd., Baltimore 6, Md.
Mueller, Alexander (47)
682 Thayer Blvd., Northville, Mich.
Mueller, Ambrose E., Jr. (46)
8 White Oaks, Route 1, House Springs, Mo.
Mueller, Anthony J. (47)
15817 E. San Jose Ave., Puente, Calif.
Mueller, Clemens O. (44)
Mooney, Mueller, Ward Co., Box 1616, Indianapolis 6, Ind.
Mueller, Florence (43)
4930 Terry Ave., St. Louis, Mo.
Mueller, Fred A. (41)
2129 University Ave., Berkeley, Calif.
MUELLER, JOHN H. (47)
4401-7 Ruff's Lane, Robbinsdale 22, Minn.
MUELLER, NORBERT R. (17)
Hermiston, Oreg.
Mueller, W. M. (45)
645 Broadway, Albany 1, N. Y.
Muench, Albert A. (45)
608 N. Salina St., Syracuse 8, N. Y.
Muench, William F. (47)
330 N. Erie, Toledo 4, Ohio.
Muenzberg, Paul H. (43)
6 Summit Rd., Port Washington, L. I., N. Y.
Muesing, William C. (47)
New Ulm, Minn.
Mukerji, Bishnupada (42)
Central Drugs Laboratory, Gov't of India, 110 Chittaranjan Ave., Calcutta, India.
Mularz, Virginia (48)
4832 W. Altgeld, Chicago 39, Ill.
Muldoon, Hugh C. (13)
School of Pharmacy, Duquesne Univ., Pittsburgh, Pa.
Mulford, H. K., Jr. (42)
38th and Ludlow Sts., Philadelphia, Pa.
Mulhauser, George C. (39)
117 S. Main St., North Syracuse, N. Y.
Mulholland, Catherine S. (44)
5615—21st Ave. S., Minneapolis 7, Minn.
MULL, BERT R. (38)
R. R. 9, Box 319-A, Indianapolis 44, Ind.
Mullen, Francis C. (45)
126 Greenbank, Piedmont 11, Calif.
Mullen, Raymond E. (45)
2325—9th Ave., Oakland 6, Calif.
Mullendore, M. Gray (46)
3003—13th Ave., S., Birmingham 5, Ala.
Muller, Catherine L. (48)
717 S. Dodson Ave., San Pedro, Calif.
Muller, Julius (39)
6824—15th Ave., Brooklyn, N. Y.
Mullican, Genevieve H. (46)
Box 223, Wesson, Miss.
Mullican, John R. (46)
Dixie Pharmacy, Donaldsonville, La.
Mullick, Louis F. (45)
7 Bradford Rd., Mt. Vernon, N. Y.
Mulligan, Robert E. (47)
1815 Shallcross, Folcroft, Pa.
Mullin, Joseph J. (45)
Box 39, Station B., Brooklyn, N. Y.
Mullins, Cecil B. (45)
Rt. 2, Box 154, Coeburn, Va.

Mullins, Edward D. (43)
1081 N. Palm Canyon Dr., Palm Springs, Calif.
Mulloy, Charles F. (44)
431 Leroy, Buffalo, N. Y.
Multhauf, Alex. F. (48)
2479 S. Howell Ave., Milwaukee 7, Wis.
Munch, A. V. (45)
Munch Drug Store, Plateau, Ala.
Munch, Graham W. (46)
40 Scranton Ave., Lake Bluff, Ill.
MUNCH, JAMES C. (26)
306 S. 69th St., Upper Darby, Pa.
Mundstock, Harvey (47)
343 N. 35th St., Milwaukee 8, Wis.
Mundy, Elbert J. (49)
1186 Edgewood Ave., Jacksonville 5, Fla.
Munemori, Kikayo L. (47)
547 Truman Boyd Manor, Long Beach 10, Calif.
Munn, Marguerite (46)
Box 105, Liberty Lake, Wash.
Munroe, Harold W. (32)
Deerfield, Wis.
Munzel, Kurt E. (48)
Badstrasse 5, Baden, Switzerland.
Mupsik, Herman M. (49)
2229 Penrose Ave., Baltimore 23, Md.
Murad, Henry (49)
37 Maple Ave., Cedarhurst, L. I., N. Y.
Murdock, Burton K. (44)
10 Main, Kennebunk, Me.
Murfin, Arthur L. (45)
514 W. Church, Knoxville, Tenn.
Murphey, Theodore C. (49)
150 Mt. Diablo Blvd., Lafayette, Calif.
Murphree, Dan E. (49)
Lawson VA Hospital, Box 195, Chamblee, Ga.
Murphy, Dean D. (46)
2308 W. 7th St., Los Angeles 5, Calif.
Murphy, Dennis E. (40)
3175 Linwood Rd., Cincinnati, Ohio.
Murphy, Edward W. (49)
1321 Quincy St., N. W., Washington, D. C.
Murphy, George V. (47)
817 North Ave., North Braddock, Pa.
Murphy, Gus Jr. (49)
Overlook Rd., Greenville, Ala.
MURPHY, HUBERT W. (44)
812 N. LaSalle St., Indianapolis 1, Ind.
Murphy, Jean M. (48)
39 Felton Ave., Staten Island 10, N. Y.
Murphy, Jennings (38)
161 W. Wisconsin Ave., Milwaukee 3, Wis.
Murphy, John E. (45)
1958 Delaware, Buffalo 16, N. Y.
Murphy, John T. (45)
Massachusetts General Hospital, Boston, Mass.
Murphy, Lewine (46)
College Hospital, Ames, Iowa.
Murphy, M. A. (49)
2838 Beach Blvd., Gulfport, Fla.
Murphy, William P. (45)
85 Central St., Leominster, Mass.
Murray, Allen F. (45)
8600 Verree Rd., Philadelphia 11, Pa.
Murray, Dickson C. (48)
Gen. Del., Newgulf, Tex.
Murray, Minard E. (47)
109 E. Oklahoma, Guthrie, Okla.
Murray, Nelson H. (43)
24 N. Main, Concord, N. H.
Murray, Wilber M. (47)
629 N. Main, Hutchinson, Kan.
Murray, William P. (45)
2001 Auburn Ave., Cincinnati 19, Ohio.
Muscante, Lucille (47)
1232 Walnut St., McKeesport, Pa.
Muscarella, James A. (47)
79 Main St., Lodi, N. J.
Muse, John C. (47)
252 Main, New Martinsville, W. Va.
Musetto, Vincent A. (47)
523 Main St., Boonton, N. J.
Musick, Albert H. (35)
Univ. of Tennessee School of Pharmacy, 874 Union Ave., Memphis 3, Tenn.
Muskoff, Daniel H. (47)
201 E. Liberty, Wooster, Ohio.
Muskoff, George E. (44)
Navarre, Ohio.
Musser, Beatrice R. (48)
2508 Grand Ave., S., Minneapolis 4, Minn.
Mussman, Domenic A. (46)
1 McCoy Rd., McKees Rocks, Pa.
Muster, Frederick E. (47)
4629 Spruce St., Philadelphia 4, Pa.
Muster, William (48)
102 Liberty St., Ridgewood, N. J.
Musto, Genevieve M. (47)
9012—3rd Ave., North Bergen, N. J.
Musto, William V. (46)
2700 Hudson Blvd., Union City, N. J.
Muth, Edward S. (47)
2305 Roslyn Ave., Baltimore 16, Md.
Muth, John H. (47)
4147 N. 45th St., Milwaukee, Wis.
Myers, E. Gordon (48)
862 Columbia Ave., Akron 10, Ohio.
Myers, Earl C. (47)
201 Superior St., Rossford, Ohio.
Myers, George J. (46)
c/o Daugherty Drug Store, Jeannette, Pa.
Myers, George R. (49)
Myers Drug Store, 1432—10th St., Gering, Nebr.
Myers, Gilbert J., (42)
Norwich Pharmacal Co., Norwich, N. Y.
Myers, John M. (46)
32 W. Randolph St., Chicago 1, Ill.
Myers, John W. (49)
20 Sherman Ave., Washington, Pa.
Myers, Maxine (46)
E. 50 Fairview, Spokane, Wash.
Myers, Walter D. (47)
Oakland, Iowa.
Myers, William B. (47)
405 W. Market St., York, Pa.
Myerson, Maurice R. (46)
2222 Grant St., Evanston, Ill.
Myman, Louis (39)
1560–64 Park Place, Brooklyn 13, N. Y.

# N

Nachtigall, Mrs. J. M. (46)
Third St., Tecumseh, Nebr.
Nadeau, Benoit (44)
68¾ Saunders, Quebec, Canada.
Nadeau, H. (49)
100 W. St. Paul St., Montreal, Canada.
Nadeau, Meril A. (49)
83 Maple St., Lewiston, Me.
Naden, Lloyd G. (46)
Franklin, Nebr.
Nadkarni, Moreshwar V. (46)
1187/12, Poona 5, Bombay, India.
Naef, Paul A. (40)
Sandoz Chemical Works, Inc., 68 Charlton St., New York 14, N. Y.
NAIR, SADASHIV P. (25)
Nair Bldg., Lamington Rd., Bombay, No. 4, India.
Najarian, Ralph C. (41)
1314 Isabella Ave., Wilmette, Ill.
Nakamura, Frank F. (38)
125 Second St., Box 1415, Marysville, Calif.
Nakamura, Shiro (48)
2620 E. 3rd St., Los Angeles 33, Calif.
Nakashima, Sadako (46)
802—15th, Seattle, Wash.
Nakazawa, Warren M. (48)
319 Rockdale, Cincinnati 29, Ohio.
Nalewaik, Edmund J. (49)
1537 Barnum Ave., Bridgeport 8, Conn.
Nance, R. F. (49)
929 Bridge St., Vernonia, Oreg.
Nansen, Bruce E. (47)
1615—10th Ave., Lewiston, Idaho.
Napier, Mary D. (48)
6603 Estrella, Los Angeles, Calif.
Napieralski, John A. (45)
1937 Clinton St., Buffalo, N. Y.
Napoleon, Amel (46)
802 Chambers St., Trenton 10, N. J.
Nari, Philip (45)
c/o Nari Drug Store, Damurtchi Buld, Baghdad, Iraq.
Narunsky, Reuben (49)
Main & Mechanic Sts., Englishtown, N. J.
Nash, Albert R. (49)
7515 Furmanville Ave., Middle Village, L. I., N. Y.
Nash, Joe B. (46)
Foundation Apts., 304 N. Blvd., Galveston, Tex.
Nash, William B., Jr. (45)
2 Union St., South Weymouth 90, Mass.
Nassberg, Lawrence (49)
3442 Reading Rd., Cincinnati 29, Ohio.
Nastase, Morris F. (47)
R. F. D. Box 221, Broad St., Paulsboro, N. J.
Natzke, John N. (48)
317 E. Cleveland St., Portervil Calif.
Nau, Frank (18)
310 N. W. 5th St., Portland, Oreg.
Naugles, Anthony F. (46)
Main St., Cor. Landing Ave., Smithtown Branch, N. Y.
Nault, J. Albert (46)
Pleasant St., Concord, N. H.
Naumoff, Abraham (49)
1689 Ave. A, Schenectady 8, N. Y.
Navach, Joseph F. (47)
458 Main St., Warren, R. I.
Nawrocki, Theodore (45)
551 Grove St., Irvington, N. J.
Naylor, Penn F. (43)
5082 Buckingham, Detroit 24, Mich.
Nayman, Burton D. (46)
800 Third Ave., Brackenridge, Pa.
Nazario-Delgado, Rafael (48)
Box 6154, Loiza St. Sta., Santurce, Puerto Rico.
Neal, Browning A. (43)
U. S. Marine Hospital, Buffalo, N. Y.
Neal, Lois M. (47)
R. F. D. 1, Box 40, Curtice, Ohio.
Nealon, Daniel F. (36)
P. O. Box 485, Paris, Tenn.
Neary, Wm. H. (47)
301—9th, Sheldon, Iowa.
Neckerman, Grace P. (45)
2517 Greensburg Pike, Pittsburgh 21, Pa.
Neeley, A. LeRoy (47)
2833 Dearborn, Salt Lake City, Utah.
Neely, Tom Jr. (48)
4407 Fontainbleau, New Orleans 15, La.
Neff, James F. (40)
7445½ Broadway, Kansas City 5, Mo.
Neff, Lloyd L. (44)
301 E. 12th St., Kansas City 6, Mo.
Neff, Lloyd L., Jr., (48)
12th & McGee Sts., Kansas City 6, Mo.
Neff, Robert H. (49)
17 Willis Ave., London, Ohio.
Neff, Stephen (47)
2010 7th Ave., Los Angeles 16, Calif.
Negrete, Pete (46)
2544 W. 5th St., Los Angeles 5, Calif.
Negron, Ida A. (49)
3113 Douglass, Raleigh, N. C.
Neham, Harold (46)
1048 President St., Brooklyn 25, N. Y.
Nehlsen, E. A. (46)
1306 Grant, Ypsilanti, Mich.
Nehring, Henry F. (45)
4245 Carter Ave., St. Louis 15, Mo.
Neiman, Franklyn L. (49)
84 Clinton Pl., Staten Island 2, N. Y.
Neimeth, Edward (30)
c/o National Magnesia Co., Inc., 83rd St. & Cooper Ave., Brooklyn 27, N. Y.
Neligan, Harold F. (46)
c/o S. M. Wallace, 1848 Elm St., Stratford, Conn.
Nelsen, R. C. (45)
4071 N. E. 42nd St., Portland 13, Oreg.
Nelson, Carl E. (26)
5635 Calumet Ave., Hammond, Ind.

Nelson, Chas. T. (43)
Sparta, Tenn.
Nelson, Christine S. (49)
901 E. 7th St., Winston-Salem, N. C.
Nelson, David W. (49)
366 Big Hill Ave., Richmond, Ky.
Nelson, Rino (47)
600 N. Kingshighway, Apt. 613, St. Louis, Mo.
Nelson, Ethel E. (45)
2701—14th Ave., Oakland, Calif.
Nelson, Ethel R. (45)
Apt. 804, 645 Stockton St., San Francisco 8, Calif.
Nelson, George W. (47)
314 E. Slocum St., Rice Lake, Wis.
Nelson, Harry A. (42)
635 Gettysburg St., Pittsburgh 6, Pa.
Nelson, Howard B. (39)
2300 S. Columbus, Arlington, Va.
Nelson, John W. (43)
College of Pharmacy, Ohio State University, Columbus, Ohio.
Nelson, Knute M. (46)
1505 Tower Ave., Superior, Wis.
Nelson, Lewis (49)
1900 Alfresco Pl., Louisville, Ky.
Nelson, Vincent H. (48)
9003—5th Ave., N. E., Seattle 5, Wash.
Nelson, W. E. (49)
Sequim, Wash.
Nelson, Wm. Donald (43)
2025 W. Broadway, Minneapolis, Minn.
Nelson, William E. (46)
312 Cook Ave., Ridgway, Pa.
Nemon, Harriet M. (30)
133 Connellsville St., Dunbar, Pa.
Nemon, Luther M. (24)
133 Connellsville St., Dunbar, Pa.
Neninger, Fred M. (16)
153 Montague St., Brooklyn 2, N. Y.
Nesbit, Robert H. (49)
6321 Stanton Ave., Pittsburgh 6, Pa.
Neshkoff, Mary (46)
Route 11, Box 560, Toledo 7, Ohio.
Netland, Duane E. (47)
Red Cross Pharmacy, State & High Sts., Salem, Oreg.
Nettina, C. Edward (44)
120 Wright Ave., Buffalo, N. Y.
NETZ, CHARLES V. (19)
College of Pharmacy, Univ. of Minnesota, Minneapolis 14, Minn.
Neufeld, Elizabeth K. (38)
1020—6th Ave., Moline, Ill.
Neuffer, Henry H. (46)
40 Church St., Abbeville, S. C.
Neuger, Joseph M. (47)
11407 Kinsman Rd., Cleveland 4, Ohio.
Neukom, S. C. (47)
c/o Ever Ready Drug Co., 202 E. Glendale Ave., Glendale, Ariz.
Neumann, Arthur H. (36)
4733 W. North Ave., Milwaukee 8, Wis.
Neumann, Edmund C. (47)
2352 Fond Du Lac Ave., Milwaukee 6, Wis.
Neumann, John H. (42)
Lewiston, Minn.
Neumann, Rosemarie (44)
Lewiston, Minn.
Neun, Charles J. (48)
c/o Morgan & Millard, Inc., 301 E. Baltimore St., Baltimore, Md.
Neupert, George R. (47)
602 W. University Ave., Urbana, Ill.
Neuroth, Milton L. (45)
School of Pharmacy, McGuire Hall, Medical College of Virginia, Richmond 19, Va.
Neva, Arnold C. (43)
c/o College of Pharmacy, Univ. of Washington, Seattle, Wash.
Nevel, Charles W. (43)
17301 Milburn Ave., Cleveland, Ohio.
Nevel, Fred A. (47)
14719 Madison Ave., Lakewood 7 Ohio.
Neven, Julius O. E. (25)
1080 Cypress Ave., Brooklyn 27, N. Y.
Neveu, Mary M. (42)
465—34th St., Oakland, Calif.

Neville, William R., Jr. (25)
1710 W. 6th St., Austin 21, Tex.
Nevin, Ruth I. (46)
6259 Denton, Belleville, Mich.
NEVIN, THOS. (12)
1360 Midland Ave., Bronxville 8, N. Y.
Newberry, M. J. (45)
City Drug Store, Andalusia, Ala.
Newby, Alpha D. (49)
Willamina, Oreg.
Newcomb, E. Allen (49)
330 W. 42nd St., New York 18, N. Y.
NEWCOMB, EDWIN L. (06)
330 W. 42nd St., Rm. 2718, New York, N. Y.
Newcomer, Robert W. (46)
1133 Brackenridge Ave., Brackenridge, Pa.
Newell, Ruth M. (45)
Verona Rd., Verona, Wis.
Newhard, Aaron T. (49)
1205 Main St., Northampton, Pa.
Newkirk, Dorothy M. (47)
P. O. Box 35, Belfair, Wash.
Newkirk, William T. (49)
Box 27, Jeffersontown, Ky.
Newland, Donald L. (40)
87 Washington Ave., Oceanside, L. I., N. Y.
Newman, Abraham (49)
721—14th Pl., Miami Beach 39, Fla.
Newman, H. S. (44)
2017 Stenton Ave., Philadelphia 38, Pa.
Newman, Maurice D. (45)
460 Hawthorne Ave., Newark 8, N. J.
Newman, Richard F. (46)
Veterans Administration Center, c/o Pharmacy, Wood, Wis.
Newman, Robert L. (47)
1611½ Miami St., South Bend, Ind.
Newquist, Mabel M. (22)
225 Nehoiden St., Needham, Mass.
Newton, Howard C. (12)
179 Longwood Ave., Boston 15, Mass.
Ng, Sally (48)
1010 Washington St., San Francisco, Calif.
NICHOLS, ADLEY B. (19)
43rd St. & Kingsessing Ave., Philadelphia, Pa.
Nichols, Charles (45)
282 Parker Ave., Clifton, N. J.
Nichols, Clarence V. (46)
103 W. Broadway, Anadarko, Okla.
Nichols, Fred R. (43)
1102 E. 8th St., Traverse City, Mich.
Nichols, H. A., Jr. (45)
1991—46th Ave., San Francisco 16, Calif.
Nichols, John S. (47)
4824 Chevy Chase Blvd., Chevy Chase 15, Md.
Nichols, Josephine (37)
172 Main St., Winona, Minn.
Nichols, Lucy (49)
3234 Ellington Dr., Hollywood 28, Calif.
Nichols, Margot D. (45)
400 Perkins St., Oakland 10, Calif.
Nichols, Milton E. (48)
224 Main St., Reedsburg, Wis.
Nichols, William F. (47)
McKesson & Robbins Inc., P. O. Box 3308, Seattle 14, Wash.
Nicholson, Christine M. (46)
Post Road, Westport, Conn.
Nicholson, Joseph A. (49)
1115 W. State St., Trenton 8, N. J.
Nicholson, M. J. (44)
Willcox, Ariz.
Nicholson, William R. (49)
155 S Broadway, Coos Bay, Oreg.
Nickel, A. J. (48)
4790 N. Hopkins St., Milwaukee 9, Wis.
Nickel, Kenneth G. (46)
5 South Taylor Ave., St. Louis 8, Mo.
Nickerson, J. Paul (47)
3011 School St., Des Moines 11, Iowa.
Nicklaus, Robert T. (46)
860 Gilbert St., Columbus 6, Ohio
Nickum, Julian (47)
State & Main Sts., Sharon, Pa.

Nicoletti, Dominick J. (46)
242 Drake Ave., New Rochelle, N. Y.
Nidecker, Arnold W. (47)
3600 Richmond St., Philadelphia 34, Pa.
Nie, William H. (43)
503 Pike St., Covington, Ky.
Niebuhr, Donald L. (46)
208 E. Wisconsin Ave., Milwaukee 2, Wis.
Niebuhr, Henrietta E. (48)
322 W. Main St., Clarksburg, W. Va.
Nied, Edward C. (46)
3510 Gerber Ave., Pittsburgh 12, Pa.
Nielsen, Charles M. (48)
918 N. Martin Ave., Tucson, Ariz.
Nielsen, Norma K. (46)
327 W. 77th, Seattle 7, Wash.
Nielsen, Paul E. (46)
100 Broadway, Hillsdale, N. J.
Nielsen, Walter G. (47)
648 Rosemary Lane, Burbank, Calif.
NIEMEYER, GLORIA (42)
2426—19th St., N. W., Apt. 202, Washington 20, D. C.
Niemiec, Thaddeus V. (37)
5357 Agatite Ave., Chicago 30, Ill.
Niesciur, Leonard (47)
290 Sweet Ave., Buffalo 12, N. Y.
Nieves, Louis E. (46)
Munoz Rivera St., 1016, Rio Piedras, Puerto Rico.
Nigro, Nelly A. (45)
2390 Cedar Ave., Long Beach 6, Calif.
Niklas, Mrs. Adam (45)
2311 Pulaski, Hamtramck 12, Mich.
Niles, Edward H. (14)
802 E. Market St., Indianapolis 2, Ind.
Ninatti, Theodore G. (48)
220 Florence Ave., Oakland 11, Calif.
Ninger, Fred O. (46)
144-44 Sanford Ave., Flushing, L. I., N. Y.
NITARDY, F. W. (05)
176 Columbia Heights, Brooklyn 2, N. Y.
Nitsch, Charles A. (48)
5606 Main St., Elkridge 27, Md.
Nitti, A. C. (38)
110 Skillman Ave., Brooklyn 11, N. Y.
Nix, Glenn T. (49)
201 Buchanon St., Stamps, Ark.
Nix, Leroy A., Jr. (47)
215 S. Cicero Ave., Chicago, Ill.
Nixon, Joseph G. (44)
1801 Old Shell Rd., Mobile, Ala.
Nobe, Sydney (45)
1734 Parker St., Berkeley, Calif.
Noble, Alice (32)
P. O. Box 629, Chapel Hill, N. C.
Noble, J. O. (45)
P. O. Box 82, 1101 N. Troy St., Dayton 4, Ohio.
Noble, Robert L. (49)
921 Logan Ave., Lafayette, Ind.
Nobles, Joy F. (45)
Box 1603, Meridian, Miss.
Nobles, Lottie M. (44)
Marks, Miss.
Noel, R. H. (45)
c/o Bristol Labs., Inc., Thompson Rd., East Syracuse, N. Y.
Noer, Victor R. (45)
Colfax, Wis.
Noh, Joseph G. (24)
170 Varick St., New York 13, N. Y.
Nolan, Howard E. (49)
2201 Castlewood Dr., Toledo 12, Ohio.
Nolan, Walter C. (49)
2027 S. E. Division, Portland, Oreg.
Nolan, William J. (47)
203 Baldridge Bldg., Omaha 2, Nebr.
Noll, Mrs. Violet B. (47)
830 N. Bentalou, Baltimore 16, Md.
Nollen, Garrett H. (26)
109—1st Ave., W., Newton, Iowa.
Nollen, Lorraine L. (49)
109—1st Ave., W., Newton, Iowa.
Nomura, Richard M. (37)
4919 N. Winthrop, Chicago 40, Ill.
Nonhof, Glen F. (47)
2631 N. 59th, Milwaukee 10, Wis.

Noonan, Elizabeth J. (47)
Highland Hospital, South Ave. & Bellevue, Rochester 7, N. J.
Noordhoek-Hegt, Rudolf J. (47)
C. P. I. M., Emmastad, Bernhardlaan 2, Curacao, N. W. I.
Nordby, Robert A. (48)
Box 236, Vashon, Wash.
Nordrum, Oscar M. (44)
378 Selby Ave., St. Paul 2, Minn.
Nordskog, L. S. (43)
1314—100th W., Duluth, Minn.
Norin, George W. (48)
1235 Channingway, Berkeley, Calif.
Norman, Wayne J. (47)
Norman Drug Store, La Salle, Colo.
Norris, Earl M. (39)
4706 Liberty Heights Ave., Baltimore, Md.
Norris, Emmet N. (49)
1343 Chestnut St., Waukegan, Ill.
Norris, Floyd F., Jr. (48)
Clements Drug Co., La Grange, Ga.
Norris, Herbert A. (41)
687 Ocean Ave., Jersey City, N. J.
Norris, J. Doyle (44)
1605 Frederick Ave., St. Joseph, Mo.
Norris, Joseph A., Jr. (48)
686 Pleasant St., New Bedford, Mass.
Norris, Leighton C. (47)
68 Blackhawk St., Janesville, Wis.
Norris, Margaret (42)
3818 Palmyra, New Orleans 19, La.
Norris, Paul E. (44)
College of Pharmacy, Univ. of Michigan, Ann Arbor, Mich.
Norris, Thomas G. (46)
824 Pacific, Osawatomie, Kans.
Norris, William P., Jr. (19)
2409 Western Ave., Peoria, Ill.
North, Albert K. (27)
Canada Pharmacal Co., Ltd., London, Ont., Canada.
North, Herman H. (46)
417 Broad St., Bloomfield, N. J.
Northgraves, Orleau M. (47)
20 Gerrard St., E., Toronto 2, Ont., Canada.
Northrop, Theron F. (45)
Box K, North Bend, Oreg.
Norton, Frank R. (44)
5403 Detroit Ave., Cleveland 2, Ohio.
Norton, Fred, Jr. (47)
1089 E. Lamar, Memphis, Tenn.
Norton, Harvey T. (45)
898 Higuera St., San Luis Obispo, Calif.
Norton, James J. (47)
113 S. Spruce, Traverse City, Mich.
Norwesh, Alexander J. (49)
2 Singer Pl., Glen Cove, N. Y.
Nosek, William J. (46)
6001 W. Cermak Rd., Cicero 50, Ill.
Nottingham, J. Curtis (49)
205 W. Grace St., Richmond 20, Va.
Noullet, Clothilde B. (49)
2555 Acacia St., New Orleans 17, La.
Novack, C. A. (40)
825 S. 8th St., Minneapolis 4, Minn.
NOVE, MARVIN (45)
844 A Ave., N. E., Cedar Rapids, Iowa.
Novello, Leonard G. (47)
190-17 Williamson Ave., Springfield Gardens 13, N. Y.
Novick, Bernard (47)
66 Powell St., Brooklyn 12, N. Y.
Novick, Jess (46)
1628 Lincoln Pl., Brooklyn 33, N. Y.
Nowak, Alois J. (49)
1452 Broadway, Buffalo 12, N. Y.
Nowak, Stanley W. (45)
246 E. Main St., Fall River, Mass.
Nowell, Wm. Paul (45)
4903 Edmonston Ave., Hyattsville, Md.
Nowicki, Florian W. (49)
6118 S. Karlov Ave., Chicago 29, Ill.
Nowicki, George T. (48)
64 Santa Clara, Apt. 3, Oakland, Calif.
Nowlin, William B. (49)
1365 Elm Ave., Glendale 1, Calif.
Noyes, Charles W. (22)
405 N. Main St., Wallingford, Conn.
Noyes, Glen C. (49)
2405 Park Rd., Spokane 15, Wash.
Nucera, Michael (47)
610 E. 183rd St., New York 57, N. Y.
Nuckolls, Heath B. (48)
232 Veta, Pueblo, Colo.
Nuessle, Noel O. (47)
16 Jendale Court, Jennings 21, Mo.
Nugent, Elsie (49)
1024 Mandeville St., New Orleans, La.
Nunez-Melendez, Esteban (37)
University of Puerto Rico, Rio Piedras, Puerto Rico.
Nunn, Morrell A. (43)
141 Stroop Rd., Dayton, Ohio.
Nunziata, Gennaro P. (45)
58 Skillman Ave., Brooklyn 11, N. Y.
Nuse, Harry A. (35)
295 Lafayette Ave., New York 12, N. Y.
Nutter, Frank L. (47)
Outwood, Ky.
Nutter, Gerald L. (43)
Nutter Pharmacy, Bartlesville, Okla.
Nydell, Ronald (48)
1027—44th St., Brooklyn 19, N. Y.
Nyegre, Eleanore M. (46)
1705 Craig St., McKeesport, Pa.
Nykiforuk, Anna J. (48)
3711 Hampton Blvd., Royal Oak, Mich.

## O

Oakes, Jean W. (41)
240 Belleville Ave., Bloomfield, N. J.
Oatis, John R. (45)
1737 Woodmont Ave., Arnold, Pa.
Obert, Raymond C. (47)
334 Grove Ave., Cincinnati 15, Ohio.
O'Brien, Clinton C. (48)
1203 Bellevue Ave., Dublin, Ga.
O'Brien, Eileen T. (46)
2209 E. New York St., Indianapolis 1, Ind.
O'Brien, Francis J. (28)
Albany College of Pharmacy, New Scotland Ave., Albany 3, N. Y.
O'Brien, J. F. (45)
267 Bridge St., Manchester, N. H.
O'Brien, John E. (34)
1700 Douglas, Omaha, Nebr.
O'Brien, John L. (46)
6635 N. Campbell Ave., Chicago 45, Ill.
O'Brien, Neill (49)
Winter Park, Fla.
O'Brien, William J. (45)
765 Kempton St., New Bedford, Mass.
O'Brien, William P. (44)
529 Jefferson Ave., New Orleans 15, La.
Ocasio, Carlos M. (46)
P. O. Box 7092, Santurce, Puerto Rico.
Ochsenhirt, Walter J. (46)
2710 Shadeland Ave., Pittsburgh 12, Pa.
Oclassen, Charles A. (45)
468 De Witt St., Buffalo, N. Y.
O'Connell, C. Leonard (23)
101 W. Steuben St., Pittsburgh 5, Pa.
O'Connell, James F. (45)
242 Western Ave., Allston, Mass.
O'Connell, John F. R. (46)
101 W. Steuben St., Pittsburgh 5, Pa.
O'Connor, Joseph J. (47)
104 S. Union Ave., Cranford, N. J.
O'Connor, Mary (46)
210 E. 24th, South Sioux City, Nebr.
Octavio h., Miguel (46)
c/o Drogueria Americana, Apartado No. 6, Caracas, Venezuela, S. A.
O'Day, David W. (42)
School of Pharmacy, Univ. of Wyoming, Laramie, Wyo.
O'Dell, Robert A. (48)
6840 N. 7th St., Philadelphia 26, Pa.
Odian, Alice (44)
Suburban Hospital, Bethesda 14, Md.
O'Donnell, Herbert M. (49)
Box 187, Logansport, La.
O'Donnell, John J. (49)
36 B. Crawford Village, McKeesport, Pa.
O'Donnell, John R. (46)
200 Franklin St., Bloomfield, N. J.
O'Donnell, Joseph E. (44)
609 Madison Ave., Toledo, Ohio.
Oehler, Bernice (47)
1117 Virginia Blvd., San Antonio 3, Tex.
Oehling, Fred W. (46)
836 Seventh Ave., Coraopolis, Pa.
Oehrli, H. A. (31)
62 Avenue D'Ouchy, Lausanne, Switzerland.
Oelrich, Kenneth E. (46)
Mulberry St., Tipton, Iowa.
Oester, Y. T. (34)
8545 S. Justine Ave., Chicago, Ill.
OFFUTT, W. R. (38)
230 E. Market St., Louisville, Ky.
Ofman, Gutta (47)
Carrera 16 #20-07 Ap. 402, Bogota, Colombia, S. A.
Ogden, Lloyd B. (46)
Box 38, Garden Grove, Calif.
Ogden, William H. (49)
3647 S. E. Tolman, Portland, Oreg.
Oglesby, Robert M. (49)
750 Gibbon St., Bartow, Fla.
O'Harrow, Edgar A. (45)
P. O. Box 526, Bloomington, Ind.
Ohlmeyer, Louise S. (48)
2909 Bergenline Ave., Union City, N. J.
Ohlson, Dean M. (46)
Ogden, Iowa.
Ohly, Robert W. (46)
249 Oak St., Oberlin, Ohio.
Ohm, Roland J. (46)
3075 S. Howell Ave., Milwaukee 7, Wis.
Ohmart, Leslie M. (31)
179 Longwood Ave., Boston 15, Mass.
Oilschlager, Carl A. (46)
2312—20th St., Meridian, Miss.
Oishi, Akiye (47)
1661 A. Mottsmith Dr., Honolulu, T. H.
Ojena, Peter P. (49)
609 S. Grand Ave., Los Angeles, Calif.
Ojha, K. N. (48)
Department of Pharmacology, The University, Sheffield 10, England.
Okamoto, S. Harold (46)
1707 Octavia St., San Francisco 9, Calif.
Okitsu, Jou (46)
1108 S. Kingsley Dr., Los Angeles 6, Calif.
Olafsson, Sig. (44)
c/o Reykjavikur Apotek, Reykjavik, Iceland.
Olalla, Ricardo (47)
Rios Rosas 28, Madrid, Spain.
Olcott, Jordan T. (49)
239 Main St., Aurora, Ind.
O'Leary, John J. (49)
3238 S. Union Ave., Chicago, Ill.
Oleson, Sydney M. (41)
212 Bridge St., Chippewa Falls, Wis.
Oleszczuk, Melvin J. (45)
219 S. Wolfe St., Baltimore 31, Md.
Oliker, Sidney H. (45)
241 E. 58th St., Brooklyn 3, N. Y.
Oliner, Irvin N. (45)
2100 Point View Ave., Apt. 4, Los Angeles 34, Calif.
Olitzky, Morris (49)
23 Mayflower St., Pittsburgh 6, Pa.
Olive, Alfred H. (46)
Howard College, Birmingham, Ala.
Oliver, Dwight L. (45)
2651 Las Aromas, Oakland 11, Calif.
Oliver, Fred C. (48)
Escambia Drug Store, Atmore, Ala.
Olgaard, Verner N. (47)
419 Van Buren, South Haven, Mich.
Olmstead, L. T. (44)
3227 Goddard Rd., Toledo, Ohio.
Olsen, Charles (44)
1515 Herring, Waco, Tex.
Olsen, Olaf J. (22)
12 W. Kings Hgwy., Mt. Ephraim, N. J.
Olsen, Paul C. (42)
43rd & Kingsessing Ave., Philadelphia 4, Pa.
Olshin, Meyer D. (49)
114 Congress St., Newark 5, N. J.

Olson, Andrew J. (46)
c/o Mills Drug, Rapid City, S. Dak.
Olson, Arnold E. (49)
Box 214, Forsyth, Mont.
Olson, Arnold L. (47)
2460 W. Hopkins St., Milwaukee 6, Wis.
Olson, Ben O. (46)
Wind St., Flandreau, S. Dak.
Olster, William (47)
361 Madison St., Passaic, N. J.
Olszewski, Dell A. (47)
323 S. 80th St., Milwaukee 14, Wis.
Olynyk, Irene O. (48)
757 Bathurst St., Toronto, Ont., Canada.
O'Mally, Patrick H. (39)
1853 Seneca St., Buffalo, N. Y.
Oman, Jack D. (49)
2400 N. Killingsworth, Apt. 5, Portland 11, Oreg.
Omohundro, A. L. (44)
McKesson & Robbins, Inc., Bridgeport, Conn.
O'Neill, William Jr. (48)
1418 Spring Way, Berkeley 8, Calif.
Oneto, John F. (48)
1600 Funston Ave., San Francisco 22, Calif.
Onimura, Lillian S. (49)
6505 N. Fairhill St., Philadelphia 26, Pa.
Ontko, Harry G. (47)
7817—28th Ave., Kenosha, Wis.
Onufrock, Frank (47)
332 S. Tejon St., Colorado Springs, Colo.
Oosting, Russell V. (45)
2445 Elmwood Dr., Grand Rapids, Mich.
Openshaw, Walter (46)
1605 S. 16th St., Phoenix, Ariz.
Oplatak, Joseph C. (46)
2903½ Constance St., New Orleans, La.
Oppen, Sigrid M. (47)
Box 337, Green Bay, Wis.
Oppenheim, Marvin (46)
2095 Rossmoor Rd., Cleveland 18, Ohio.
Optenberg, Clarence (48)
102 N. Main St., Oconomowoc, Wis.
Oreggia, Sabina S. (46)
Box 183, Gonzales, Calif.
Orlowski, Simeon (47)
17218 Fenelon, Detroit 12, Mich.
Ormerod, Alfred K. (44)
1537 N. 4th St., Columbus 1, Ohio.
Orner, Leonard (43)
715 Linden Ave., Teaneck, N. J.
Oro, Ruben O. (48)
Avenida B, No. 78, Panama, Panama.
Orr, George A. (47)
69 State Rd., R. D. 6, Binghamton, N. Y.
Orr, Jack E. (45)
School of Pharmacy, Univ. of Utah Salt Lake City, Utah.
Orr, Winnifred M. (49)
529 S. Knowles, Royal Oak, Mich.
Ort, John M. (44)
R. D. Foot Hills Rd., Somerville, N. J.
Ortega, Louis B. (30)
260-18—75th Ave., Bellerose, L. I., N. Y.
Orteneau, Germain (47)
487 Dixwell, New Haven, Conn.
Ortiz, Antonio (45)
Laboratories Andromaco Ltd., 90 Rua Arco de Cego, Lisbon, Portugal.
Ortiz, Miguel A. (46)
2 Iglesia Dr., Fajarda, Puerto Rico.
Ortiz, Raul (47)
Cuernavaca #54, Mexico, D. F.
Ortolan, Joseph A. (39)
600 Lafayette Ave., Brooklyn N. Y.
Ortzow, John (49)
1301 E. 14th St., San Leandro, Calif.
Os, D. van (47)
Groote Rozenstraat 17, Groningen, Netherlands.
Osborn, Melvin C. (48)
112 North 2nd, Le Sueur, Minn.
Osborne, G. E. (49)
1541 East 3080 South, Salt Lake City 6, Utah.
Osborne, James E. (47)
343 Main, Calais, Me.
Osburn, D., Mason (47)
655 Maryland Ave., N. E., Washington 2, D. C.
Oscar, Stanley (49)
250 W. 85th St., New York 24, N. Y.
Oscar, Stephen W. (48)
Hopkins Clinic Inc., 8017 Jones Rd., Cleveland 5, Ohio.
Oschwald, Ray J. (46)
Donaldsonville, La.
O'Shea, Frank L. (45)
278 Chelmsford, Lowell, Mass.
Oshiro, Kenei (35)
741 N. King St., Honolulu 51, T. H.
Osman, William P. (46)
440 Rockaway Pkwy., Brooklyn 12, N. Y.
Osofsky, Samuel (49)
614 E. Spring St., New Albany, Ind.
Osofsky, Jeanette B. (34)
1105 Harding Rd., Elizabeth, N. J.
Osol, Arthur (29)
43rd St. & Kingsessing Ave., Philadelphia 4, Pa.
Ossar, Earl (49)
402 Long Lane, Upper Darby, Pa.
OSTERMAN, HENRY (14)
511 W. Sixth St., Seymour, Ind.
Osterweil, Jacob (37)
16 Elliot Pl., Bronx, N. Y.
Ostrow, Jacob (48)
2900 Germantown Ave., Philadelphia 33, Pa.
Ostrowski, Irene J. (45)
822 W. Cuyler Ave., Chicago 13, Ill.
Oswald, Louis W. (44)
15 S. Loomis St., Naperville, Ill.
Otero, Humberto (49)
260 Diez, de Andino, Santurce, P. R.
Ott, Arthur T. (46)
24 Young St., Tonawanda, N. Y.
Ott, C. Roy (45)
R. R. 1, Sugar Grove, Ohio.
Ott, David E. (47)
251 Euclid Ave., Mansfield, Ohio.
Ott, Jason (44)
4052 Lewis Ave., Toledo, Ohio.
Otto, Albert F. E. (40)
1007 Seneca Pl., Peoria 4, Ill.
Oumaye, Colin Y. (46)
465 N. King St., Honolulu, T. H.
Overbye, Alviron (46)
550 Maple Ave., Teaneck, N. J.
Overman, Arthur A. (49)
1800 N. 23rd St., St. Louis 6, Mo.
Overstreet, George T. (21)
811 S. Francis St., Terrell, Tex.
Owen, Carl E. (46)
229 W. Main, Richmond, Ind.
Owen, Hampton C. Jr. (47)
Parkview Apts., Apt. 10, Martinsville, Va.
Owens, Earl (47)
2702—38th St., Rock Island, Ill.
Owens, Harold B. (45)
c/o Ripon Drug Store, Ripon, Calif.
Owens, John R. (47)
19 Emerson Ave., Pittsburgh 5, Pa.
Owsley, William L., Jr. (47)
Palmyra, Mo.
Owyang, Eric (48)
9 Wetmore St., San Francisco 8, Calif.
Oxenger, Robert G. (47)
R. F. D. 2, Reading, Mich.
Oxley, Fred V. (48)
Box 3, Freeport, Ill.
Ozaki, Junji (48)
523 W. 124th, Apt. 3W, New York 27, N. Y.
Ozick, William (47)
c/o Park View Pharmacy, 3287 Westchester Ave., Bronx 61, N. Y.

## P

Pablo, Herbert S., Jr. (48)
88 S. W. 20th Rd., Miami 36, Fla.
Paboojian, Kay N. (45)
330 Front St., San Francisco 11, Calif.
Pabrai, P. R. (46)
Dept. of Pharmacology, Orissa Med. Col., Cuttack, Orissa, India.
Pace, Harold W. (49)
1009 S. Elm, Sherman, Tex.
Pace, Harry W. (49)
731-33—8th Ave., Palmetto, Fla.
Pachuta, Michael (47)
151 S. Oak St., Mt. Carmel, Pa.
Packer, Emmett E. (46)
2801 Penbrook Ave., Harrisburg, Pa.
Packet, Peter (49)
213 Cedar St., Elberon, N. J.
Padron G., Juan (48)
c/o Instituto de Higiene, Cruz de la Vega a Palo Grande 223, Caracas, Venezuela, S. A.
Padval, Vishnu A. (49)
4/40 Hanuman Ter., Lamington Rd., Bombay 7, India.
Padwa, Oscar (46)
2876 Fairmount Blvd., Cleveland Heights, Ohio.
Page, Benjamin F. (47)
305 W. Park Dr., Raleigh, N. C.
Page, James J. (49)
Standish, Mich.
Pagnotti, Anthony L. (49)
164 Steward, Old Forge, Pa.
Painter, H. C. (45)
1825 H St., N. W., Washington, D. C.
Painter, John V. (39)
508 Knollwood Dr., Falls Church, Va.
Paisley, Ellwood S. (27)
6526 N. Eighteenth St., Philadelphia, Pa.
Palchak, Joseph F., Jr. (48)
825 Richford, Duquesne, Pa.
Paley, Edward (39)
U. S. Marine Hospital, E. 124th & Fairhill Rd., Cleveland 20, Ohio.
Palkovacs, Barney B., Jr. (48)
313 Home Ave., Lockland 15, Ohio.
Palm, Jack E. (48)
122 Bepler St., Daly City 25, Calif.
Palmer, Carleton H. (45)
745 Fifth Ave., New York 22, N. Y.
Palmer, David H. (46)
1926 Cleveland Ave., Mt. Vernon, Wash.
Palmer, Harold J., Jr. (48)
Anthony Pl., Riverside, Conn.
Palmer, Mathias (44)
916 E. 36th St., Baltimore 18, Md.
Palmer, Russell H. (43)
1112 S. Pennsylvania Ave., Morrisville, Pa.
Palmer, Thelma M. (44)
Danbury Hospital, 95 Locust Ave., Danbury, Conn.
Palmowska, Amelia Judith (45)
31 B St., Buffalo 11, N. Y.
Palmtag, Raymond K. (47)
611 Brewington Ave., Watsonville, Calif.
Palumbo, Adolph V. (39)
5 Ambar Pl., Bernardsville, N. J.
Pan, T. F. (47)
40 Rue Marcel Tillot, Shanghai, China.
Pancamo, J. A. (44)
2110 Arthur Ave., Bronx 57, N. Y.
Pandolfo, Mario A. (48)
5928 A McPherson Ave., St. Louis 12, Mo.
Paniello, Joseph (46)
Attapulgus, Ga.
Panone, Roger L. (49)
346 N. Division, Buffalo 4, N. Y.
Pantages, George (44)
536 A Cowper St., Palo Alto, Calif.
Panton, James H. (37)
Winthrop Stearns Co., Inc., Lab. 36, 33 Riverside Dr., Rensselaer, N. Y.
Papola, Alfred A. (49)
5742 Chestnut St., Philadelphia 39, Pa.
Pappas, James (48)
4406 Euclid Blvd., Youngstown, Ohio.
Pappas, Nicholas A. (46)
83 W. Lane Ave., Columbus 1, Ohio.
Paradowski, Leonard S. (48)
1115 W Maple St., Milwaukee, Wis.
Parcell, Harold E. (47)
4006 Strong, Kansas City, Kans.
Parcher, Raymond A. (49)
R. R. 3, Bucyrus, Ohio.
Pardi, Victor (47)
129 Sheridan Ave., Paterson 2, N. J.
Pareja, Bertha (45)
Gonzales Prada, Miraflores, Lima, Peru.
Parent, Willie T. (44)
Madawaska, Me.

Parentini, Adolph R. (43)
4300 Palisade Ave., Union City, N. J.
Parentini, Caesar F. (43)
2516 Central Union City, N. J.
Parentini, Harold C. (49)
2516 Central Ave., Union City, N. J.
Parentini, Robert L. (46)
604 Paterson Plk. Rd., Union City, N. J.
Parillo, Fred R. (49)
41 Mohawk Ave., Scotia 2, N. Y.
Park, Carl D. (48)
110 Mendoza Ave., Coral Gables 34, Fla.
Park, Floyd S. (45)
1801 Montclair St., Flint 3, Mich.
Park, Harry L. (47)
11115 S. Main, Los Angeles 3, Calif.
Park, Russell M. (46)
Menno, S. Dak.
Parke, Hervey C. (46)
c/o Parke, Davis & Co., Detroit, Mich.
Parker, E. C. (46)
956 Sherman, Ypsilanti, Mich.
PARKER, EMERY W. (21)
105 S. Glass St., Victoria, Tex.
Parker, F. L. (43)
1700 Chester Ave., Bakersfield, Calif.
Parker, George H. (46)
102 N. Main St., Franklin, Va.
Parker, Hazel J. (46)
Box 644, Conneautville, Pa.
Parker, Herbert W. (24)
Royal Pharmacy, 500 Main St., Jonesboro, Ark.
Parker, Howard E. (45)
334 W. Bryan, Bryan, Ohio.
Parker, Hubert (45)
Box 1593, Mobile 9, Ala.
Parker, Lee A. (43)
Dodge & Olcott Co., 69 Avenue A, Bayonne, N. J.
Parker, Rexford (46)
S. E. Cor. 2nd & Market Sts., Maysville, Ky.
Parker, Saul (44)
31 Hosmer St., Mattapan 26, Mass.
Parker, W. J., Jr. (44)
2907 Modesto Ave., Oakland 19, Calif.
Parkhurst, Guy R. (48)
2314 High St., Topeka, Kans.
Parkin, S. N. (46)
2910 W. Capitol St., Jackson, Miss.
Parkins, Richard D. (49)
1085 Grant Pl., Boulder, Colo.
Parkinson, Kenneth W. (47)
1126 Wellesley Ave., Steubenville, Ohio.
Parks, C. Clayton (46)
Washington Depot, Conn.
Parks, Everet (46)
1711 Spruce St., Indianapolis 3, Ind.
Parks, George W. (47)
Silvertown Pharmacy, Thomaston, Ga.
Parks, Lloyd M. (44)
University of Wisconsin, School of Pharmacy, Madison, Wis.
Parks, Milton L. (47)
Keytesville, Mo.
Parnell, Thomas F. (49)
524½ Forest Ave., Ann Arbor, Mich.
Parr, Robert L. (49)
1131 Burton, New Albany, Ind.
Parr, William (39)
706 Franklin St., Tampa, Fla.
Parrine, John J. (49)
477 Naomi St., Arcadia, Calif.
Parrish, Ira O. (46)
Forsyth, Mo.
Parsley, Millard E. (48)
713 E. Brentwood Circle, Memphis, Tenn.
Parsons, Charles W. (43)
233 S. Kenmore Ave., Los Angeles 4, Calif.
Partridge, Marie B. (49)
3557 Southport Ave., Chicago 13, Ill.
Paschall, James E. (46)
3816 E. Foothill Blvd., Pasadena 8, Calif.
Pasqualone, Dante (43)
58 Ellerton Rd., Quincy, Mass.
Pass, Meyer A. (46)
112 Pine St., South Plainfield, N. J.
Passmore, Charles G. (49)
Main, Norton, Va.
Passmore, John E. (49)
c/o Passmore's Pharmacy, Norton, Va.
Pastreich, Ben (39)
858 Fulton St., Brooklyn, N. Y.
PATCH, RALPH R. (25)
25 Congress St., Stoneham, Mass.
Patel, B. V. (45)
Drug Controller, Bombay Province, Nicol Rd., Bombay 1, India.
Patel, Jayant G. (48)
The Alembic Chemical Works Co. Ltd., Baroda, India.
Pater, Ralph H. (47)
1226 Evans St., McKeesport, Pa.
Pateychuk, Sergei (47)
210 Coltart St., Pittsburgh 13, Pa.
Patka, Rita (47)
3756 S. Paulina, Chicago 9, Ill.
Patlogan, Louis (47)
6141 Washtenaw, Chicago 45, Ill.
Patrick, M. C. (49)
Veterans Administration Center, Des Moines 9, Iowa.
Patrick, Vernon G. (49)
444—6th St., Redmond, Oreg.
Patt, Arthur M. (46)
423 Teresita Blvd., San Francisco 16, Calif.
Patt, Bernard G. (49)
137 W. North Ave., Chicago 10, Ill.
Pattee, Jewett S. (47)
3927 Fernwood Ave., Lynwood, Calif.
Patterson, Charles H. (48)
235 S. Brinker Ave., Columbus 4, Ohio.
Patterson, H. Robert (43)
86 S. Cragmont Ave., San Jose, Calif.
Patterson, J. L. (49)
P. O. Box 1025, Delray Beach, Fla.
Patterson, Jas. A. (43)
134 S. Queen St., Martinsburg, W. Va.
Patterson, James N. (48)
P. O. Box 272, Salinas, Calif.
Patterson, Jay (45)
529 Lincoln Way, San Francisco 22, Calif.
Patterson, Kelly (44)
317 E. Capitol St., Jackson, Miss.
Patterson, Regis J. (47)
403 Bodkin St., Pittsburgh, Pa.
Patterson, Robert L. (46)
1100 S. 16th St., Milwaukee 4, Wis.
Patterson, Thomas R. (48)
2605 Van Hise, Madison 5, Wis.
Patton, Harry A. (45)
715 Sutter St., Folsom, Calif.
Patton, Quentin L. (49)
802 E. Churchwell, Knoxville, Tenn.
Paul, James F. (47)
c/o Gilleland Drugs, Camden, Ark.
Paul, John B. (48)
7650 Freda Ave., Dearborn, Mich.
Paul, Robert (46)
1623 W. 67th Ave., Philadelphia 26, Pa.
Paul, Theodore (41)
1460 Parkchester Rd., Bronx 62, N. Y.
Paul, William E. (41)
216 E. Drayton Ave., Ferndale, Mich.
Paulsen, Charles A. (45)
4246 N. E. Sandy Blvd., Portland 13, Oreg.
Paulsen, Pete (42)
Owl Drug Co., Astoria, Oreg.
Paulson, Roy G. (43)
107 N. North Ave., Fairmont, Minn.
Paulus, Robert E. (42)
7616 W. State St., Wauwatosa, Wis.
Pauly, R. J. (31)
147 S. Pine Ave., Albany 3, N. Y.
Pauly, William F. (46)
215 First St., Apollo, Pa.
Pauly, William J. (46)
215 First St., Apollo, Pa.
Paver, John E. (47)
15705 Bentler, Detroit 23, Mich.
Pavlicek, Adolph V. (46)
5539 W. Cermak Rd., Cicero 50, Ill.
Paynter, A. L. (42)
301 Anderson Bank Bldg., Anderson, Ind.
Peacock, Evelyn P. (40)
924 Kings Court, N. E., Atlanta, Ga.
PEARCE, HOWARD A. (94)
77 Mawney St., Providence, R. I.
Pearlman, William (47)
1505 DeBree Ave., Norfolk, Va.
Pearson, Clyde L. (48)
Route 2, Box 7, Westpoint, Miss.
Pearson, E. Kirkwood (46)
N. 1429 Monroe St., Spokane 12, Wash.
Pearson, James K. (42)
6091 Rockridge Blvd., Oakland 11, Calif.
Pearson, R. K. (44)
2624 Gunckel Blvd., Toledo 6, Ohio.
PEARSON, WILLIAM A. (08)
315 Ives Ave., Big Rapids, Mich.
Pecarsky, Seymour (46)
796 Saratoga Ave., Brooklyn 12, N. Y.
Peckham, Rolland C. (42)
24 Johnson St., Bainbridge, N. Y.
Pederson, Arthur G. (49)
Bagley, Minn.
Pedinoff, George L. (49)
3977 Bledsoe Ave., Culver City, Calif.
Pedroni, Joseph H. (47)
733—33rd St., Sacramento, Calif.
Peebles, Donald K. (45)
308 Sterling Ave., Buffalo 16, N. Y.
Peek, Orville W. (46)
Box 1225, Missoula, Mont.
Peek, William P., Jr. (49)
Donelson, Tenn.
Peele, Wilfred E. (46)
1700—36th St., N. W., Washington 7, D. C.
Peeler, Hollis L., Jr. (46)
1042 S. Buckeye St., Kokomo, Ind.
Peer, Mrs. Chana (43)
954 S. Ohio Ave., Columbus 6, Ohio.
Peever, Arthur E. (45)
363 Washington, Haverhill, Mass.
Pegg, George W. (19)
75 Lafayette Ave., East Orange, N. J.
Peiser, Roy S. (41)
1150 N. State St., Chicago, Ill.
Pelchar, John A. (47)
63 Main St., Terryville, Conn.
Pelikan, Alice E. (47)
918 Columbian Ave., Oak Park, Ill.
Pelikan, Fred O. (47)
7001 W. Roosevelt, Berwyn, Ill.
Pelikan, Otto J. (47)
918 Columbian Ave., Oak Park, Ill.
Peller, Edward W. (44)
1727 W. Lincoln Ave., Milwaukee 7, Wis.
Peller, Joseph (46)
77 Goldsmith Ave., Newark 8, N. J.
Pellerin, Henry P. (46)
129 Remsen St., Cohoes, N. Y.
Pellerin, Lionel A. (47)
144 Blake, Lewiston, Me.
Pelletier, James A. (48)
118-A W. Howard Ave., Milwaukee 7, Wis.
Pellett, James P. (49)
507 Broadway, Paterson 4, N. J.
Peluso, Joseph (42)
35-A Picotte Dr., Albany 3, N. Y.
Penberthy, Jack R. (47)
5346 Wabada, St. Louis 12, Mo.
Pendarvis, Hugh M. (47)
136 Central Ave., Long Beach, Miss.
Pendola, Santo (44)
302 Walnut St., Newark, N. J.
Peniche E., P. (44)
Apartado 8739, Mexico, D. F., Mexico.
Penick, S. Barksdale (14)
50 Church St., New York, N. Y.
Penick, S. Barksdale, Jr. (39)
50 Church St., New York, N. Y.
Penn, Bill (49)
Sidney, Iowa.
Pennoni, Alfred G. (47)
4395 E. 85th St., Cleveland 5, Ohio.
Pepper, Sidney (49)
555—41st St., Miami Beach 40, Fla.
Peregon, Walter J. (45)
11245 Somerset, Detroit 24, Mich.
Perer, Oscar (46)
1330 Western Ave., Pittsburgh 12, Pa.
Perez, Cesar O. (48)
Fernandez Juncos #1763, Santurce, Puerto Rico.
Perez, Francisco A. (45)
Villa 131, Box 321, Ponce, Puerto Rico.

Pergantides, Michael (49)
U.S.V.A. Hospital, Northampton, Mass.
Perifano, Barney B. (46)
Main at Mercer St., Greenville, Pa.
Perk, Herbert J. (47)
66 Olney Dr., Eggertsville 21, N. Y.
Perkes, Charles H. Jr. (47)
6 Haddington Ct., Clayton 5, Mo.
Perkins, Albert (49)
2638 S. Beulah St., Philadelphia 48, Pa.
Perkins, Bynum (48)
70—14th St., N. E., Atlanta, Ga.
Perkins, Charles R. (42)
3548 Rosemary, Glendale 8, Calif.
Perkins, Flentge A. (45)
Spruce & 5th Sts., Myrtle Point, Oreg.
Perkins, T. D. (42)
820 W. Washington St., San Diego 3, Calif.
Perla, Florence (49)
233 South Linden Dr., Beverly Hills, Calif.
Perlman, Joseph (49)
1441 Lunt Ave., Chicago 26, Ill.
Perlman, Kalman I. (39)
4252 W. 14th St., Chicago 23, Ill.
Perlmutter, Luba (47)
415 N. Orange Grove Ave., Los Angeles 36, Calif.
Pernot, Jules S. (46)
159 Blvd., Glen Rock, N. J.
Perrigo, Paul B. (43)
c/o L. Perrigo Co., Allegan, Mich.
Perrin, R. C. (47)
200 S. Mulberry St., Muncie, Ind.
Perrong, John P. (47)
2535 W. Parrish St., Philadelphia 30, Pa.
Perry, Clarmond A. (48)
348 Lexington Way, Burlingame, Calif.
Perry, George E. (46)
6901 62nd St., Ridgewood, N. Y.
Perry, Robert P. (48)
Box 56, Prosperity, S. C.
Perry, Thornton D. (49)
7319 Latona, Seattle 5, Wash.
Pertuch, Walter A. R. (42)
Franklin Institute, Philadelphia 3, Pa.
Perzik, Ila (48)
2910 Daisy Ave., Long Beach, Calif.
Pesa, Ludwig (47)
St. Mary's Hospital, Passaic, N. J.
Pescaro, Mary A. (45)
10 Niagara Ave., San Francisco 12, Calif.
Pescaro, Richard A. (45)
10 Niagara Ave., San Francisco 12, Calif.
Pesciotta, Marie (47)
40 Karsey St., Highland Park, N. J.
Peshkin, Gershon (49)
1014 Fourth Ave., Asbury Park, N. J.
Peskin, David (48)
1431 Somerset Pl., N. W., Washington 11, D. C.
Peterman, Ernest E. (48)
1200 Point View St., Los Angeles, Calif.
Peters, Chester (48)
926 Judson Ave., Evanston, Ill.
Peters, Fred J. (46)
R. D. 1, Collegeville, Pa.
Peters, George N. (44)
3128 Main St., Weirton, W. Va.
Peters, Hoke S. (45)
Manchester, Ga.
Peters, Warren A. (46)
95 Main St., Hudson, Mass.
Petersen, Mary (47)
2961 Madison St., Chicago, Ill.
Peterson, Alex F. (46)
P. O. Box 354, Missoula, Mont.
Peterson, Anne (45)
510—15th St., Sioux City, Iowa.
PETERSON, ARTHUR F. (29)
7 Chestnut St., Apt. 2F, East Orange, N. J.
Peterson, Charles F. (47)
116 W. Fowler, West Lafayette, Ind.
Peterson, Charles R. (48)
1205—13th St., S., Fargo, N. Dak.
Peterson, George E. (46)
303 N. Birch St., Creston, Iowa.
Peterson, Harry O. (46)
c/o Albany Surgical Co., Inc., 214 Lark St., Albany 6, N. Y.
Peterson, Ivan W. (47)
3351 Honolulu Ave., La Crescenta, Calif.
Peterson, James A. (46)
Bandon, Oreg.
Peterson, Melvin O. (47)
47 N. Peach, Medford, Oreg.
Peterson, Mervin R. (47)
Suite 6, 895 Heywood Ave., Victoria, B. C., Canada.
Peterson, N. T. (43)
300 Algonquin, Columbus 4, Ohio.
Peterson, Omer A. (40)
147—7th Ave., N., Fort Dodge, Iowa.
Peterson, Verner C. J. (48)
Medical Center Pharmacy, 64-10, Fannin St., Houston 5, Tex.
Peterson, Zeben R. (49)
18049 Northlawn Ave., Detroit 21, Mich.
Petoletti, Angelo R. (45)
Marconi Ave., Iselin, N. J.
Petoletti, Louis (48)
Oak Tree Rd., Iselin, N. J.
Petrank, Jacob S. (44)
28 Gaza St., Rehavia, Jerusalem, Israel.
Petrillo, Jennie A. (46)
Manchester Mem. Hospital, Manchester, Conn.
Petrock, Joseph Arthur (47)
18216 Curtis, Detroit 19, Mich.
Petrotta, Russell (49)
4000 First Ave., Sacramento 17, Calif.
Petruzzi, Alfred R. (49)
66 Kraft Ave., Bronxville 8, N. Y.
PETSCHE, BISMARCK W. (92)
Arlington Chemical Co., Yonkers, N. Y.
Pettersen, Holger G. (48)
2001 California, Chicago, Ill.
Pettey, Dale R. (47)
8 N. Euclid, St. Louis, Mo.
Pettit, Albert W. (46)
box 1911, Central Drug Co., Ltd., Laredo, Tex.
Peyser, John R. (49)
14227 Corbett, Detroit 13, Mich.
Pfaff, J. Paul (49)
804 Penn Ave., Wilkinsburg, Pittsburgh 2, Pa.
Pfau, Lowell R. (49)
2262 Central Ave., Memphis, Tenn.
Pfeffer, Edward G. (46)
1054 W. Burton St., Grand Rapids 9, Mich.
Pfeffer, Theodore M. (45)
119 Delmar Pl., Irvington, N. J.
Pfeiffer, Ernst W. (47)
667 Chestnut Ave., Teaneck, N. J.
PFEIFFER, G. A. (10)
Westport, Conn.
Pfeil, Robert K. (44)
80 Church St., Port Allegany, Pa.
Pflug, Solomon C. (48)
State Univ. of Iowa Pharmacy Coll. Iowa City, Iowa.
Pflugh, W. C. (45)
P.O. Box 1068, San Diego 12, Calif.
Phair, Andrew R. (44)
The Service Pharmacy, Canaan, Conn.
Phannemiller, Edward U. (47)
127 Medford Ave., Patchogue, N. Y.
Phatak, Nilkanth M. (48)
5850 S. W. Terwilliger, Portland 1, Oreg.
Phelan, J. W. (41)
6 Poplar Park Blvd., Pleasant Ridge, Mich.
Philibert, Nita H. (44)
1712 Gen. Pershing St., New Orleans, La.
Philip, Fayetta H. (48)
2942—25th St., Sacramento 17, Calif.
Philips, Shine (45)
Box #390, Big Spring, Tex.
Phillipp, August (46)
734 Creighton Ave., Dayton 10, Ohio.
Phillips, Betty F. (49)
220 Russell, West Lafayette, Ind.
PHILLIPS, CARRIE (20)
34 Nunnery Lane, Catonsville, Md.
Phillips, Charles H. (48)
4605 Drummond Ave., Chevy Chase 15, Md.
Phillips, Donald E. (49)
1522 Barvac Ave., Cincinnati 23, Ohio.
Phillips, Eleanor P. (45)
14 Chews Landing Rd., Clementon, N. J.
Phillips, Eugene (49)
C. S. B. Bldg., Paducah, Ky.
Phillips, George H. (46)
2223 W. 43rd St., Kansas City 3, Kan.
Phillips, George L. (41)
University Hospital, Ann Arbor, Mich.
Phillips, George M. (49)
112 E. Heman St., East Syracuse, N. Y.
Phillips, Gladys S. (49)
Box 231, Big Spring, Tex.
Phillips, Jacob J. (46)
220 Morgan St., Phoenixville, Pa.
Phillips, Norma W. (48)
5990 Lindenhurst Ave., Los Angeles 36, Calif.
Phillips, O. J. (49)
c/o E. R. Squibb & Sons, 401 N. Broad St., Philadelphia 8, Pa.
Phillips, Vance C. (49)
602 Water St., Port Huron, Mich.
Phillipson, John E. (47)
225 Boyles Ave., New Castle, Pa.
Phipps, Holley S. (49)
4001 N. Mississippi Ave., Portland 12, Oreg.
Piacentini, Herman J. (49)
3344 Chicago Rd., Steger, Ill.
Piacitelli, Barbara M. (48)
26 Main Ave., West Warwick, R. I.
Piantadosi, Claude (46)
2103 Summit, Union City, N. J.
Piaskowski, Victor C. (34)
7542 Michigan Ave., Detroit, Mich.
Picchioni, Albert L. (46)
Purdue College of Pharmacy, West Lafayette, Ind.
Picciano, D. E. (37)
153 Grand St., Croton-on-Hudson, N. Y.
Pickard, Ralph E. (49)
Route 9, Box 837, Toledo 12, Ohio.
Picker, Meyer B. (44)
1407 Lexington Ave., New York, N. Y.
Pickering, Robert L. (47)
251 Post St., San Francisco 8, Calif.
Picou, Eugene D. (47)
Box 607, Eunice, La.
Pieper, Joseph F. (42)
3013 Clearview Dr., Normandy, Mo.
Pierce, E. J. (45)
315 Laura St., Jacksonville 2, Fla.
Pierce, Ethel T. (49)
19 Pearl St., North Abington, Mass.
Pierce, Fred D. (45)
Barton, Vt.
Pierce, Robert B. (44)
Pierce's Drug Store, 2005 University Ave., Morgantown, W. Va.
Pierce, Robert R. (44)
2118 University Ave., Morgantown, W. Va.
Pierce, W. J. (47)
614 Elk St., Stevens Point, Wis.
Piercy, Levern J. (43)
15608 Warren, E., Detroit, Mich.
Pierle, Jack (49)
865 Chevrolet Ave., Flint, Mich.
Pierson, A. Wallace (47)
1895—8 Ave., Sacramento 17, Calif.
Pietri, Aida M. (47)
6 America Capo St., Ponce, Puerto Rico.
Pifer, Harry V., Jr. (43)
Walter Reed Gen. Hosp., Washington 12, D. C.
Pigeon, Ernest W. (47)
101 Main, Broad Brook, Conn.
Pigg, Murrell M. (47)
322 W. Harrison Ave., Clarksville, Ind.
Pike, Joseph W., Jr. (47)
c/o Cabarrus Co. Hospital, Concord, N. C.
Pilchard, J. B. (43)
1003 N. 3rd St., Harrisburg, Pa.
Piljac, William (47)
8550 Yates, Chicago 17, Ill.
Pinajian, John J. (47)
School of Pharmacy, Purdue Univ., West Lafayette, Ind.
Pinch, Richard D. (47)
8541 Midgarden, Detroit 28, Mich.
Pinchak, Seymore F. (49)
1134 Main St., Paterson, N. J.
Pinck, Joseph L. (46)
305 Broadway, Paterson, N. J.

PINES, CHARLES C. (24)
43rd St. & Kingsessing Ave., Philadelphia, Pa.
Pinney, Marjorie B. (45)
Box 1787, Pensacola, Fla.
Pinto, Michael P. (47)
161 Palisade Ave., Jersey City 6, N. J.
Piotrowski, Anthony J. (47)
9118 Jos. Campau, Hamtramck 12, Mich.
Pirilla, Joseph P. (49)
19F Rocks Ter., McKees Rocks, Pa.
Pirilla, Leonard J. (46)
Box 731, Perryopolis, Pa.
Pirruccello, S. C. (45)
Creighton Univ., Omaha 2, Nebr.
Pisa, Albert R. (43)
13900 Meyers Rd., Detroit, Mich.
Pischedda, Dr. John (49)
Chiasso, Switzerland.
Pisczek, Joseph P. (47)
3100 S. 13th St., Milwaukee 7, Wis.
Piszel, Andrew F. (46)
Arco Laboratories, 79 Niagara St., Newark, N. J.
Pitcher, Daniel G. (28)
2739 N. Broad St., Philadelphia, Pa.
Pitkin, Courtney G. (46)
7221 Northmoor Dr., University City 5, Mo.
Pitman, Donald P. (49)
127 N. Main, Mansfield, Mass.
PITTENGER, PAUL S. (12)
c/o Sharp & Dohme, Broad & Wallace Sts., Philadelphia, Pa.
Pitts, Betty L. M. (48)
426—6th Ave., N., Great Falls, Mont.
Pitts, Harold R. (47)
3700 N. Teutonia, Milwaukee 6, Wis.
Pittsinger, Roland C. (38)
832 Bedford St., Stamford, Conn.
Pituch, Eugene (48)
1534 Fifth Ave., New Kensington, Pa.
Pivo, Robert (47)
141-08 71st Rd., Flushing, N. Y.
Pizzolato, Frances (41)
3435 Carondelet St., New Orleans 15, La.
PLACAK, HARRY (02)
R. F. D., Columbus, N. C.
Platt, Marvin S. (49)
3808 Boarman Ave., Baltimore 15, Md.
Platt, Volney M. (45)
1710 W. Summit Ave., San Antonio 1, Tex.
Platz, Phyllis E. (42)
c/o Dispensary, College of Pharmacy, Univ. of Nebraska, Lincoln, Nebr.
Plaut, Edward (16)
c/o Lehn & Fink, 445 Park Ave., New York, N. Y.
Plaxco, James M., Sr. (45)
Due West, S. C.
Plein, Elmer M. (38)
Univ. of Washington, College of Pharmacy, Seattle 5, Wash.
Plemmons, Donald A. (45)
60 Lawrence Pl., Asheville, N. C.
Pletch, William H. (47)
Wilson Rexall Drug, W. 4th St., Waterloo, Iowa.
Pletcher, Ralph R. (46)
2100 Ward St., Berkeley 5, Calif.
Pletikapich, Michael (48)
6910 Hamilton Ave., Cincinnati 31, Ohio.
Plewa, Chester A. (45)
12185 Jos. Campau Ave., Hamtramck 12, Mich.
Plewa, Edward J. (45)
508 David Broderick Tower Bldg., Detroit 26, Mich.
Plogman, Edward H. (46)
2501 Fairview Ave., Cincinnati 19, Ohio.
Plotkin, Herbert E. (47)
92 W. Manchester St., Battle Creek, Mich.
Plotkin, Hyman (47)
455 W. Front St., Plainfield, N. J.
Plotner, Judson B. (46)
1601 Hillsdale Ave., Pittsburgh 16, Pa.
Plotnick, Kalman (48)
515 Ridgeway Ave., Cincinnati 29, Ohio.
Plott, Robert E. Jr. (48)
205 Locust St., Covington, Va.

Plowman, Edward D. (46)
Joliet, Mont.
Plungian, Miknail (48)
Ogonts Manor Apts., Philadelphia 41, Pa.
Pobiner, Bernard (48)
105 Main St., Dobbs Ferry, N. Y.
Pobst, Olive E. (46)
4233 Sunnyside Ave., Seattle 3, Wash.
Poche, Roland F. Jr. (46)
5227 Constance St., New Orleans 15, La.
Poe, Charles F. (26)
Univ. of Colorado, Boulder, Colo.
Poetsch, C. E. (44)
31 A Parkway Apt., Haddonfield, N. J.
Pohling, Ilse Olga (45)
2650 Ridge Ave., Evanston, Ill.
Pohlman, Paul H. (46)
125 E. Main St., Barrington, Ill.
Poirier, Earl J. (46)
727 N. W. 5th St., Faribault, Minn.
Pokorny, Frank J. (33)
115 W. 68th St., New York 23, N. Y.
Pokorny, J. M. (39)
126 N. Cedar St., Nevada, Mo.
Pokres, Morris A. (43)
5801 Delmar, St. Louis, Mo.
Polak, Jose (38)
P. O. Box 1138, Mexico, D. F.
Polakof, Ivan (48)
c/o Village Winery, Inc.
P. O. Box 216, Escalon, Calif.
Polin, H. J. (42)
521 N. Clark St., Chicago, Ill.
Polin, Rose (45)
1246 Independence Blvd., Chicago 23, Ill.
Pollack, Melvin M. (40)
3533 E. Capitol St., Washington, D. C.
Pollard, Santo J. (48)
Simpson, W. Va.
Poloner, Harry (49)
238 W. Bigelow, Newark 8, N. J.
Poloni, Bruno C. (46)
40 Holyoke St., San Francisco 24, Calif.
Pomerantz, Leo M. (49)
657 W. Otterman, Greensburg, Pa.
Pomerantz, Marjorie R. (45)
2162 Kimball St., Brooklyn 10, N. Y.
Pommer, Mary E. (45)
71 High St., East Haven 12, Conn.
Pompa, James P. (42)
c/o J. R. Watkins Co., 150-178 Liberty St., Winona, Minn.
Ponas, John W. (44)
716 Barclay St., Johnstown, Pa.
Poole, Mabel A. (47)
93 W. Las Flores Dr., Altadena, Calif.
Pooler, Donald L. (47)
136 Washington Ave., Hutchinson, Minn.
Pope, Thomas N. (46)
Spring Garden, Ala.
Popper, Morris S. (45)
10 Stuyvesant Oval, New York 9, N. Y.
Poret, Leonce I. (46)
1535 Tulane Ave., New Orleans 19, La.
Porr, John W. (46)
147 N. Front St., Steelton, Pa.
Porrata-Doria, Doris M. (47)
Palmer 146 N., Guayama, Puerto Rico.
Porsin, Henri A. (46)
39 Rue Claude Bernard, Paris 5, France.
Portanova, Joseph (46)
483 E. 7th St., Brooklyn 18, N. Y.
Porter, Allen S. (47)
1219 W. Lawn Ave., Racine, Wis.
Porter, Charles E. (49)
115 N. Highland Ave., Marfa, Tex.
Porter, Earl P. (46)
Veterans' Administration Hospital, Memorial Station, Muskogee, Okla.
Porter, Garrett B. (47)
47 N. Seminary, Madisonville, Ky.
Porter, Harold (26)
28 Woodford St., Worcester 4, Mass.
Porter, J. Edward (29)
252 Furman St., Syracuse 5, N. Y.
Porter, John R. (49)
Lincoln Ave., Mars, Pa.

Porter, William R. (47)
1102½ Woodward Ave., Tomah, Wis.
Porterfield, Edwin M. (45)
1910 Monroe St., Eugene, Oreg.
Portnoy, Fred J. (49)
3613 Dawson St., Pittsburgh 13, Pa.
Poska, Sophia F. (46)
3101 S. Morgan St., Chicago 8, Ill.
Poskanzer, Alfred T. (49)
190 Second Ave., Albany 2, N. Y.
Posner, Sidney (48)
1734 S. Ardmore, Los Angeles 6, Calif.
Posnick, Maurice J. (49)
165 State St., Springfield 3, Mass.
Post, Russell A. (47)
6953 Geyser Ave., Reseda, Calif.
Posta, George (46)
201 Division St., Trenton 10, N. J.
Potechin, Joseph (46)
76 Main St., Somerville, N. J.
Potocki, Paul (46)
221 S. Franklin St., Wilmington 14, Del.
Potrepka, Chester A. (43)
Old Mill Rd., Plantsville, Conn.
Potrepka, Frank V. (41)
Plantsville Pharmacy, Plantsville, Conn.
Potter, Alfred E. (23)
703—14th St., Oshkosh, Wis.
Potter, Clayton W. (47)
8514 W. 80th Ter., Overland Park, Kans.
Potter, Doyle L. (47)
c/o Potter Drug Co., Wheaton, Minn.
Potter, Elsie P. (45)
29 N. 24th St., Philadelphia 4, Pa.
POTTER, M. H. (06)
Piggott, Ark.
Potthoff, William F. (47)
202 S. Reading Rd., Sharonville, Ohio.
Potts, Harry (47)
1439 S. 25th St., Terre Haute, Ind.
Potts, Jack R. (44)
2nd St. Pike & Red Lion Rd., Huntingdon Valley, Pa.
Pouchnik Henry J. (49)
2203 S. 82nd St., West Allis 14, Wis.
Powell, Clarence E. (46)
321 N. Riley Ave., Indianapolis, Ind.
Powell, Francis C. (49)
2005 University, Austin, Tex.
Powell, Harold D. (49)
Box 56, Kountze, Tex.
Powell, James H. (44)
305 Broadway Ave., Elsberry, Mo.
Powell, Roy (47)
Union Pharmacy, Douglas, Ga.
Powell, Scott A. (41)
760 Grant St., Denver 3, Colo.
Powell, Walter L. (47)
Rt. 2, Freewater, Oreg.
POWRELL, WILLIAM C. (95)
119 Green St., Snow Hill, Md.
Power, Elizabeth C. (43)
68 E. Main St., Freehold, N. J.
Powers, Emmett (42)
825 E. 10th Ave., Denver 3, Colo.
Powers, Joseph C. (49)
14048 Park Grove, Detroit 5, Mich.
POWERS, JUSTIN L. (25)
2215 Constitution Ave., N. W., Washington 7, D. C.
Powers, L. H. (49)
Powers Pharmacy, Farnam St. at 24th, Omaha, Nebr.
Powers, Raymond J. (49)
611 Roosevelt, Redwood City, Calif.
Powers, Wilbur E. (42)
330 Hamilton Ave., Trenton 9, N. J.
Powers, Worth Bagley (43)
Henderson, Tenn.
Prado V., Jorge (47)
4a Ave. Norte 63, Guatemala, C. A.
Pranulis, Peter B. (46)
16 Cottage St., Peabody, Mass.
Prasad, Sankatha (47)
Dept. of Pharmaceutics, Benares Hindu Univ., India.
Prasada-Rao, John R. (49)
6 Recreation Rd., Paya Labar, Singapore, South East Asia.
Prather, James H. (49)
Owenton, Ky.

Prather, O. L. (39)
106 W. 6th St., Tulsa, Okla.
Pratt, Harold W. (45)
744 Bowen Ave., East Chicago 15, Ill.
Pratt, Harry J. (47)
5121 Pine St., Philadelphia 43, Pa.
Pratt, Ralph F. (47)
130 E. Jones St., Milford, Ill.
Pratt, Robertson (44)
Univ. of Calif., College of Pharmacy, The Medical Center, San Francisco 22, Calif.
Preble, Philip M. (46)
Columbus Drug Co., Parsons, Kans.
Precourt, Archie F. (44)
162 Wilson St., Manchester, N. H.
Prell, Isadore (46)
3050 E. Broadway, Tucson, Ariz.
Preskus, Julius A. (49)
11012 S. Michigan Ave., Chicago 28, Ill.
Press, Frederick J. (44)
Regional Office, Veterans Administration Center, Chicago, Ill.
Presto, Joseph F. (48)
Jefferson Hosp., Pharmacy Dept., Philadelphia 7, Pa.
Preston, John E. (47)
933 Stanyan St., San Francisco 17, Calif.
Preston, Robert J. (47)
2323 E. Trombly, Detroit 11, Mich.
Prettyman, Robert L. (48)
Univ. of Colorado, Biology Dept., Boulder, Colo.
Prevo, Virgil S. (49)
1814 N. 68th, Lincoln, Nebr.
Pribyl, Bernard A. (49)
Heron Lake, Minn.
Price, A. J. (49)
122 Montgomery, Montgomery, Ala.
Price, Eugene L. (46)
1226 Jefferson, Waterloo, Iowa.
Price, H. G. (39)
Rex Hospital, Raleigh, N. C.
Price, Haskel (48)
105 Oak St., Sharonville, Ohio.
Price, Jesse C. (43)
Fifth St., Beverly, Ohio.
Price, John L. (45)
2nd St. at North, P. O. Box 614, Harrisburg, Pa.
Price, Lillian (46)
696 Amsterdam Ave., N. E., Atlanta, Ga.
Price, Stuart M. (43)
Shapero Drug Store, Cleveland Hotel, Cleveland, Ohio.
Price, William A. (46)
2217 Waterdale Ter., Louisville 5, Ky.
Prigodich, Stephen (48)
47 Willow St., New Britain, Conn.
Primas, Theodore W., Jr. (48)
c/o Primas Pharmacy, 236 State St., Clairton, Pa.
Prisk, Charles L. (47)
351 S. Main St., Salt Lake City 1, Utah.
Pritchard, Mearl D. (38)
35 North St., Buffalo, N. Y.
Probert, George (45)
P. O. Box 245, Torrance, Calif.
Probst, Fred A. (47)
1706 S. Logan St., Lansing 10, Mich.
Prock, Glen C. (49)
3101 Gr. Rte Saint John, New Orleans 19, La.
Procopio, Vincent A. (49)
37 Linden St., Hackensack, N. J.
Prokop, Margaret M. (49)
300 Jefferson St., Bridgeport 7, Conn.
Pronzato, William J. (49)
8007 Woolston Ave., Philadelphia 19, Pa.
Proper, Robarts L. (48)
U. S. Marine Hospital, Seattle, Wash.
Prosch, George (46)
c/o Prosch Pharmacy, 6357 W. Cermak, Berwyn, Ill.
Protas, Benjamin (32)
1701 Houston Ave., Port Arthur, Tex.
Protus, Louis (46)
2507 Professor St., Cleveland 13, Ohio.

PROUT, WILLIAM A. (25)
Medical College of South Carolina, Dept. of Pharmacy, Charleston, S. C.
Prouty, Harry D. (46)
3168 Puritan Ave., Lincoln, Nebr.
Provenza, Stephen J. (42)
109 E. Montgomery St., Baltimore 30, Md.
Provost, David W. (48)
Box 59, Seaside, Oreg.
Pruce, Alfred A. (47)
2635 Loyola Southway, Baltimore 15, Md.
Prucker, Earl (49)
c/o Fourniers' Pharmacy, Main St., Stafford Springs, Conn.
Prusak, Leonard P. (47)
3164 Meadowbrook, Cleveland 18, Ohio.
Prusky, Samuel C. (48)
4844 Denny Ave., North Hollywood, Calif.
Prybyla, Michael (49)
11401 E. Seven Mile Rd., Detroit 5, Mich.
Pryce, Mary L. (47)
1003 College Ave., Racine, Wis.
Pryluck, H. (39)
1907 Prospect Ave., Bronx, N. Y.
Pucci, Dino J. (47)
1009 J St., Sacramento 14, Calif.
Pucci, Peter A. (47)
1009 J St., Sacramento 14, Calif.
Puckett, Lucien E. (48)
Route 2, Hartselle, Ala.
Puhl, Richard H. (45)
c/o Staples Pharmacy, Staples, Minn.
Pullen, Henry A. (48)
10992 Somerset, Detroit 24, Mich.
Pulley, Betty A. (44)
11001 S. Downey Ave., P. O. Box 26, Downey, Calif.
Pully, Ruth E. (48)
Sandy Hook, Conn.
Puls, Rudolph L. (47)
4001 Montgomery Rd., Cincinnati 12, Ohio.
Pulverenti, Anthony J. (48)
7 Giuffrida Pl., Lawrence, Mass.
Pumarejo, Pablo (49)
Box 1635, Bayamon, Puerto Rico.
Puopolo, George (47)
18 Cooper St., Boston, Mass.
Purcell, W. J. (49)
352 Tallulah Ave., Jacksonville, Fla.
Purdum, W. Arthur (31)
3706 Elkader Rd., Baltimore 18, Md.
Purdy, John E. (47)
316 E. 18th St., Hays, Kans.
Puro, Jerry (49)
2016 Union St., Brooklyn 12, N. Y.
Purpura, Michael C. (48)
8817 S. Eggleston Ave., Chicago 20, Ill.
Purser, John P., Jr. (49)
315 Laura, Jacksonville 2, Fla.
Purtle, Thomas L. (45)
294 Washington St., Winchester, Mass.
Puryear, George L. (49)
3411 Macon Rd., Memphis, Tenn.
Puteska, Sidney L. (47)
418 Paulison Ave., Passaic, N. J.
Putnam, F. C. (40)
c/o Professional Pharmacy, 119 E. 8th St., Long Beach, Calif.
Putnam, Francis M. (37)
129 Medford St., Malden, Mass.
Putney, Blake F. (47)
831 Curfew St., St. Paul 4, Minn.
Putt, Earl B. (14)
16 E. 34th St., New York 16, N. Y.
Pyczynski, Stanley J. (41)
22422 Gratiot St., East Detroit, Mich.
Pylant, Fred N. (48)
503 Haynes St., Marietta, Ga.

## Q

Quan, Stuart Fun (43)
Univ. of California, Hooper Foundation, San Francisco 22, Calif.
Queeman, Roy G. (47)
303 W. Pine St., New London, Wis.
Quental, Joao J. B. (46)
Rua Torres Homem 1.082, Rio De Janeiro, Brazil, S. A.

QUIGLEY, RICHARD L. (02)
3415—34th St., N. W., Washington, D. C.
QUILLEN, JOE W. (20)
Room 515, U. S. Appraisers Stores, Baltimore, Md.
Quillen, Raymond T. (45)
2031 Harshman Blvd., Springfield, Ohio.
Quimby, Maynard W. (28)
Massachusetts College of Pharmacy, 179 Longwood Ave., Boston 15, Mass.
Quinlan, Hazel S. (44)
Platte, S. Dak.
Quinn, Garth H. (47)
2227 Bundy Dr., West Los Angeles 25, Calif.
Quinn, Thomas M. (46)
1324 Formosa Ave., Hollywood 46, Calif.
Quinones, Adelina (48)
1404 Foria St., Santurce, Puerto Rico.
Quinter, Daniel A. (46)
202 E. King St., Lancaster, Pa.
Quixtner, John C. (41)
Clinic Pharmacy, Marshfield, Wis.

## R

Raabe, Rudolph Henry (22)
316 South Gilbert St., Ada, Ohio.
Raasch, Walter C. (47)
804 W. North Ave., Milwaukee 5, Wis.
RABAK, FRANK (05)
2826—39th St., N. W., Washington 7, D. C.
Rabanus, E. M. (46)
230 Fifth, Coalinga, Calif.
Rabe, Charles, Jr. (44)
179 Longwood Ave., Boston, Mass.
Rabe, J. F. (43)
State House, Des Moines, Iowa.
Rabinovitz, Jacob (47)
181 E. 161st St., New York 51, N. Y.
Rabinowitz, Abraham (18)
931 Fairmount Ave., Philadelphia 23, Pa.
Rabinowitz, Alfred (46)
46 Franklin St., Bloomfield, N. J.
Rabinowitz, Melvin (47)
2802 Ave. I, Brooklyn 10, N. Y.
Rabinowitz, Norman (49)
2356 Gerritt St., Philadelphia 46, Pa.
Rabinowitz, Philip (44)
69–29 Grand Ave., Maspeth, L. I., N. Y.
Rabinowitz, Phoebe (47)
1047 Brighton Beach Ave., Brooklyn 24, N. Y.
Rabinowitz, Seymour (49)
501 W. 124th St., New York 27, N. Y.
Rabon, Edwin M. (46)
1436 S. Rockford, Tulsa 5, Okla.
Racow, Harold Lewis (39)
63 Hale St., Beverly, Mass.
Radcliffe, Arthur W. (47)
3905 Cherrywood Rd., Austin, Tex.
Radecki, John I. (49)
3159 Elm St., Toledo 8, Ohio.
Rader, Fred A. (46)
3645 Jacob St., Wheeling, W. Va.
Radke, Clarence T. (47)
1157 N. 45th St. Milwaukee 8, Wis.
Radoff, Arnold (47)
2713 N. 44th St., Milwaukee 10, Wis.
Radoff, William (39)
2206 Holland Ave., Bronx 67, N. Y.
Radun, Nathan A. (46)
1345—47th St., Brooklyn 19, N. Y.
Rae, Hugh A. (48)
400 Selby Lane, Atherton, Calif.
Rae, Jean G. (47)
226 Berryman Dr., Snyder 21, N. Y.
Raedy, John H. (48)
121–28 95th Ave., Rich Hill, New York, N. Y.
Raeuber, E. G. (46)
217 N. Water, Milwaukee 2, Wis.
Rafal, Nathan M. (46)
2705 Marlboro Ave., Norfolk, Va.
Rafuse, O. L. (48)
385 Summer St., Boston 10, Mass.

Rager, Robert B. (49)
907 S. Railroad Ave., Portage, Pa.
Ragland, T. Ellsworth (42)
2801 Guilford Ave., Baltimore, Md.
Rago, Kenneth V. (46)
212 E. Forest Ave., West Englewood, N. J.
Ragusa, Edward (44)
860 East 27th St., Brooklyn, N. Y.
Rahm, George E. (47)
1800 Elmore St., Cincinnati 23, Ohio.
Rahola, Francisco (48)
Ponce De Leon Ave., 1006, Santurce, P. R.
Raia, Anthony (46)
9304 Third Ave., Brooklyn 9, N. Y.
Raiche, A. G. (36)
425 E. Wisconsin Ave., Milwaukee, Wis.
Rainey, Russell D. (46)
306 Bona Allen Bldg., Atlanta 3, Ga.
Raiser, Carl K. (49)
1530 Spring Garden St., Philadelphia 1, Pa.
Raish, Dewey J. (49)
5129 Mullen Ave., Los Angeles 43, Calif.
Raiter, Roscoe O. (49)
901 Cloquet Ave., Cloquet, Minn.
Rakeman, Henry E., Jr. (33)
Ennis, Mont.
Raley, Deane D. (49)
1325 E. 15th, Tulsa, Okla.
Ralston, Minter B. (48)
Box 552, Weston, W. Va.
Ramen, Sidney (48)
278 Ross Ave., Hackensack, N. J.
Ramers, Victor M. (47)
13 Hyde Rd., Bloomfield, N. J.
Ramirez, Manuel A. (46)
1914 Loiza St., Santurce, P. R.
Ramoneda, Marie (44)
1206 Louisana Ave., New Orleans 15, La.
Ramos-Alvarez, Carmen T. (45)
Bloque Q-3, Caparra Heights, P. R.
Ramos-Candolita, Josefina (48)
1459 Eddy St., Apt. 5, San Francisco, Calif.
Ramsay, Herbert D. (40)
336 S. Gladstone, Kansas City 1, Mo.
Ramsdell, Bartlett S. (49)
1360 Niagara St., Buffalo 13, N. Y.
Ramseier, Verne C. (46)
1727 Athens St., Boulder, Colo.
Ramsey, Leon (47)
c/o Crown Drug Co., Hutchinson, Kans.
Ramstad, Carl V. (49)
Wahpeton, N. Dak.
Rand, Newell S. (48)
9 Fairview Pl., Bloomfield, N. J.
Rand, Thos. R., Jr. (40)
2218 Creston Rd., Raleigh, N. C.
Randall, Henry W. (45)
206 Hartford Pl., Utica 4, N. Y.
Randall, Martha L. (45)
R. D. 7, North Canton, Ohio.
Randolph, Gene B. (44)
5536 Carpenter, North Hollywood, Calif.
Ranelli, Don (48)
796 Howard Ave., New Haven 11, Conn.
Ranelli, Joseph J. (49)
Sheffield St., Old Saybrook, Conn.
Raney, Richard M. (47)
123 W. Main St., Osborne, Kans.
Rankin, Carl W. (49)
Monticello, Ky.
Rankin, Claire D. (45)
Route 1, Johnson City, Tenn.
Rankos, George W. (49)
1017 N. 10th St., Tacoma 3, Wash.
Ranks, Garnet G. (46)
Ponoka, Alberta, Canada.
Ransom, William J. (48)
7329 Reading Rd., Cincinnati, Ohio.
Raphael, Israel (47)
3424—30th Ave., Astoria, L. I., 3, N. Y.
Rapoport, G. H. (48)
547 High St., Portsmouth, Va.
Rappaport, David S. (47)
60 Tellinghast St., Newark 8, N. J.
Rappaport, N. Herman (45)
432 Market St., Camden, N. J.
Rappoport, Howard (48)
5423 Morse St., Philadelphia, Pa.
Rappel, Herbert (47)
751 Saratoga Ave., Brooklyn, N. Y.
Rapps, Alfred (46)
611 Park Ave., Plainfield, N. J.
Rasanen, Paul R. (45)
Pharmaceutical Research Dept., Abbott Laboratories, North Chicago, Ill.
Rash, J. M. (49)
300 Payne St., Auburn, Ala.
Rasher, Amy (46)
229 N. Main, Kingman, Kans.
Raskin, David C. (47)
79-42—212th St., Flushing, N. Y.
Rasmusen, Holger B. (41)
Spooner, Wis.
Rasmussen, John E. (47)
1601 N. Van Buren, Milwaukee 2, Wis.
Rasmussen, Timon N. (47)
149 E. Wisconsin Ave., Oconomowoc, Wis.
Ratcliff, Karl A. (45)
c/o Jensen-Salsbery, Inc., 21st & Penn., Kansas City 10, Mo.
Ratcliffe, Mary Ellen (44)
2129 S. Fox St., Denver, Colo.
Rathbun, Edwin J. (39)
2027 Chilton Dr., Glendale 1, Calif.
Rathert, Charles E. (47)
Box 93, Mayville, Wis.
Ratnagiriswaran, A. N. (46)
25 Sullivan Garden Rd., Mylapore, Madras, India.
Rattiner, A. Alan (45)
854 Ridgewood Road, Milburn, N. J.
Rau, Melvin J. (48)
209 Harrison Ave., Williamsburg, Va.
Raubenheimer, Herbert C. (41)
28 Tredwell Ave., Lynbrook, L. I., N. Y.
Rauchfleisch, Edward O. (45)
61 E. 202 St., Euclid 19, Ohio.
Ravin, Mary F. (45)
3443 Chestnut St., Philadelphia 4, Pa.
Rawe, Elizabeth (49)
1306 Broadview Blvd., Brackenridge, Pa.
Rawlins, Albert L. (49)
939 Roslyn Rd., Grosse Pointe Woods 30, Mich.
Ray, Fred, Jr. (44)
Jonesboro, N. C.
Ray, Robert L. (49)
4622 N. E. Glisan, Portland 13, Oreg.
Rayburn, Leon (45)
Rayburn Pharmacy, Guntersville, Ala.
Raynes, Clayton D. (49)
381 W. Mithoff St., Apt. B, Columbus 8, Ohio.
Rea, Kenneth Alton (43)
1009 N. Howard St., Mishawaka, Ind.
Read, George C. (44)
c/o Geer Drug Co., Spartanburg, S. C.
Reade, Clifford M. (47)
3651 Jay St., Sacramento 16, Calif.
Reagen, Joe W. (44)
1001 W. 7th, Little Rock, Ark.
Reagan, R. K. (48)
130 N. Main St., Bishop, Calif.
Reamer, I. Thomas (37)
Duke Hospital, Durham, N. C.
Reaves, John A. (48)
112—68th Place, N., Birmingham 6, Ala.
Red, Basil D. (46)
P. O. Box 277, Ellisville, Miss.
Redden, Leo F. (44)
1100 Kenmore Ave., Buffalo, N. Y.
Reddick, Emory C. (47)
Lee Pharmacy, Albany, Ga.
Reddick, Victor LeDrew (45)
Rancho Los Amigos, Hondo, Calif.
Redfield, Duane C. (47)
Box 304, Bucklin, Kans.
Redlich, Frank A. (46)
1706 Sunset, Apt. 311, Los Angeles 26, Calif.
REDMAN, KENNETH (29)
College of the Ozarks, Clarksville, Ark.
Redmond, Clarence A. (47)
2265 W. 10th, Topeka, Kans.
Redmond, John P. (46)
301 N. Monroe St., Hartford City, Ind.
Reeb, Arthur H. (49)
941 E. Main St., Louisville 6, Ky.
Reeb, William F. (47)
8942 Euclid Ave., Cleveland 6, Ohio.
Reece, Jack (49)
504 N. 14th, Ashland, Nebr.
Reed, Chan J. (48)
43 E. Bridge St., Oswego, N. Y.
Reed, Claude M. (33)
Albany College of Pharmacy, Albany, N. Y.
Reed, Everett, F., Sr. (46)
452 Memorial Pkwy., Niagara Falls, N. Y.
Reed, Helen V. (46)
1791—9th Ave., San Francisco, Calif.
Reed, Howard Loring (27)
179 Longwood Ave., Boston, Mass.
Reed, Philip Archie (45)
Maben, Miss.
Reed, Russell R. (47)
92 Main St., Newtown, Ohio.
Reep, Alan D. (49)
3511 DeKalb Ave., Bronx 67, N. Y.
Rees, Edward W. (46)
119 N. 3rd St., Darby, Pa.
Rees, P. T. (37)
3110 S. High St., Arlington, Va.
Rees, Ralph G. (49)
Eagle Hill, Geneva, Ohio.
Rees, Winifred L. (44)
309 E. Second South St., Salt Lake City 2, Utah.
Reese, J. A. (34)
School of Pharmacy, University of Kansas, Lawrence, Kans.
Reeves, Ervin P. (43)
1455 Cole St., Columbus 5, Ohio.
Regalia, Elvus D. (48)
711A San Anselmo Ave., San Anselmo, Calif.
Regus, John U., Sr. (48)
1420 S. Seventh St., Alhambra, Calif.
Rehfuss, Jacob H. (13)
902 N. Hunter St., Stockton, Calif.
Rehn, Theodore L. (46)
353 Park, Glencoe, Ill.
Rehorst, George C. (49)
3311 N. Seventh St., Milwaukee 6, Wis.
Rehrauer, Robert P. (49)
1723—18th St., Two Rivers, Wis.
Reibel, Anna M. (43)
352 Martin Rd., Union, N. J.
Reibel, Harry B. (39)
930 E. Grand St., Elizabeth, N. J.
Reibel, Max (48)
105 N. Wood Ave., Linden, N. J.
Reich, David (46)
8502 Grand Ave., Elmhurst, N. Y.
Reich, Samuel J. (48)
709 E. Indian School Rd., Phoenix, Ariz.
Reichert, Rayner J. (49)
701 Water St., Albert Lea, Minn.
Reid, Arthur W. (46)
802 E. Market St., Indianapolis, Ind.
Reid, George E. (45)
224 Birks Bldg., 718 Granville St., Vancouver, B. C., Canada.
Reid, L. Melvin (44)
524 N. Broadway, Dayton, Ohio.
Reid, W. D. (49)
1582 Tutwiler, Memphis 7, Tenn.
Reif, Edward A. (49)
1550 Woodbine St., Pittsburgh 1, Pa.
Reif, Edward C. (21)
1431 Blvd. of the Allies, Pittsburgh 19, Pa.
Reif, Ernest (15)
1251 N. Second St., Philadelphia, Pa.
Reilly, Samuel Austin (39)
121 Indiana Ave., Maplewood, N. J.
Reilly, Thomas F. (46)
c/o Rice Walgreen Drug Store, Rosenberg, Tex.
Reimers, Harriette (49)
1500 New Hampshire Ave., N. W., Washington 6, D. C.
Reimers, Robert J. (48)
1629 Fifth Ave., Moline, Ill.
Rein, Stanley S. (46)
29-11—63rd Dr., Forest Hills, N. Y.

**Reindollar, William F. (23)**
5701 Stoney Run Dr., Baltimore, Md.
**Reines, Albert A. (47)**
20 Satellite Lane, Levittown, L. I., N. Y.
**Reinhard, Robert W. (47)**
408 W. Main St., Winnfield, La.
**Reinhardt, Alfred (39)**
2461 S. W. 25th St., Miami, Fla.
**Reinhardt, Christine (47)**
4348 Ashland Ave., Norwood 12, Ohio.
**Reinhart, Howard B. (47)**
Ventura Medical Pharmacy, 13708 Ventura Blvd., Sherman Oaks, Calif.
**Reinhofer, John J. (47)**
4631 N. Paulina St., Chicago 40, Ill.
**Reinhold, G. L. (39)**
6401 W. 16th St., Berwyn, Ill.
**Reinhold, John, Jr. (24)**
1715 State St., Erie Pa.
**Reinish, Frank (35)**
8 Elliott St., Morristown, N. J.
**Reinosa, Jose Angel (49)**
Versalles 15, Mexico D. F., Mexico.
**Reisbeck, Paul (48)**
Biron Dr., Wisconsin Rapids, Wis.
**Reiser, Herbert (49)**
915 Dana Ave., Cincinnati 29, Ohio.
**Reisman, Norman (47)**
401 Kearny Ave., Kearny, N. J.
**Reiswig, Norman W. (47)**
8245 Faust, Detroit 28, Mich.
**Reiter, Kurt (43)**
1 Anderson Ave., Fairview, N. J.
**Reitwiesner, Andrew A. (40)**
3716 Chrysler Bldg., New York 17, N. Y.
**Reitz, Allen G. (45)**
2301 W. Franklin St., Evansville 12, Ind.
**Remensnyder, J. P. (37)**
393 7th Ave., New York 1, N. Y.
**Remer, Paul E. (45)**
13644 Gratiot, Detroit 5, Mich.
**Remington, Porter B. (46)**
Preston, Minn.
**Remus, Luis E. (30)**
Allen No. 31, Box 1012, San Juan 5, P. R.
**Remus, William J. (47)**
311 N. Division, Grand Rapids 2, Mich.
**Remy, Eugene H. (43)**
7408-10 Wade Park Ave., Cleveland, Ohio.
**Renaud, Eugene (42)**
4145 Huron St., Dearborn, Mich.
**Rendell, Harry H. (45)**
62a Bristol Rd., West Somerset 44, Mass.
**Rennebohm, Oscar (27)**
550 W. Washington Ave., Madison Wis.
**Renner, William A. (48)**
c/o National Drug Co., Monrovia, Liberia, W. A.
**Rennick, Dan (42)**
Topics Publishing Co., 330 W. 42nd St., New York 18, N. Y.
**Rennie, William H. (49)**
6102 N. Hamilton Ave., Chicago 45, Ill.
**Rensing, Edward H. (47)**
2135 Cathedral Ave., Norwood 12, Ohio.
**Renzi, Lawrence (47)**
912 E. Mineral King, Visalia, Calif.
**Resnick, Jules (48)**
247 Munn Ave., Irvington, N. J.
**Resnick, Lou (49)**
c/o Netherland Hotel, Miami Beach 39, Fla.
**Ressler, John J. (47)**
c/o Ressler Drug Store, 608 Lake Ave., Storm Lake, Iowa.
**Reston, Theodore R. (47)**
4322 Chestnut St., Philadelphia 4, Pa.
**Retzlaff, Alvin F. (48)**
800 Center St., New Ulm, Minn.
**Retzlaff, Walter (39)**
Barkersvill, Middle Grove, N. Y.
**Reum, Virginia (49)**
786 N. Park Ave., Pomona, Calif.
**Reutzel, Joseph H. (49)**
4541 Carroll, Pittsburgh 24, Pa.
**Revson, R. F. (38)**
243 W. 17th St., New York 11, N. Y.

**Reyer, Emil (07)**
614 Portage Ave., South Bend, Ind.
**Reyburn, John A. (46)**
805 Moncure St., Fredericksburg, Va.
**Reynolds, A. Keith (44)**
657 Waterloo St., London, Ontario, Canada.
**Reynolds, Bradley A. (46)**
324 Fuller Ave., Helena, Mont.
**Reynolds, Charles F. (47)**
Main, Schenevus, N. Y.
**Reynolds, Emerson A. (49)**
Slaughters, Ky.
**Reynolds, Furman R. (47)**
41 Mill St., Charleston 17, S. C.
**Reynolds, Harry L. (47)**
4734 Main St., Lisle, Ill.
**Reynolds, Harry R. (49)**
1022 N. Louise St., Glendale 7, Calif.
**Reynolds, Ralph E. (48)**
10103 McKenney Ave., Apt. 303, Woodside Manor, Silver Spring, Md.
**Reynolds, Robert W. (48)**
312 N. Ella St., Orrville, Ohio.
**Reynolds, Rudolf (47)**
131 Nagle Ave., New York 34, N. Y.
**Reynolds, Russell D. (49)**
3912 Rivers Ave., Naval Base, S. C.
**Reznick, Martin M. (48)**
400 E. 20th St., New York 9, N. Y.
**Rheinfeld, Edward B. (46)**
6175 Kingsbury, St. Louis 12, Mo.
**Rhem, John F. (49)**
D-4 Oleander Court Apts., Wilmington, N. C.
**Rhoades, Aileen (45)**
2821 37th Ave., San Francisco 16, Calif.
**Rhoads, Wilmer B. (49)**
Hannah Ave., R. D. 3, Norristown, Pa.
**Rhodehamel, Harley Wesley (22)**
5320 N. Meridian St., Indianapolis 8, Ind.
**Rhodehamel, Robert H. (41)**
5849 Oxford St., Indianapolis, Ind.
**Rhodes, Charles R. (37)**
Manock Bldg., Hyndman, Pa.
**Rhodes, Clyde A. (46)**
2706 E. 12th Ave., Denver 7, Colo.
**Rhodes, Louise (49)**
P. O. Box 314, Big Bear Lake, Calif.
**Rhodes, Walter (41)**
6316 N. Minnesota Ave., Portland 11, Oreg.
**Ricciardi, Michael R. (49)**
120 Lake St., Jersey City 6, N. J.
**Ricciardi, Rocco Raymond (43)**
341 Communipaw Ave., Jersey City 4, N. J.
**Rice, Bethel B. (47)**
4026 N. E. 69th Ave., Portland, Oreg.
**Rice, David L. (45)**
4202 N. Henderson Rd., Apt. 4, Arlington, Va.
**Rice, Harry L. (45)**
303 E. Superior St., Chicago, Ill.
**Rice, Henry T. (44)**
Halstad, Minn.
**Rice, Herbert E. (45)**
59 Main St., Nashua, N. H.
**Rice, Raymond Clayton (43)**
1006 7th St., N. W., Canton, Ohio.
**Rice, Robb V. (34)**
Gane's Chemical Works, 611-641 Broad St., Carlstadt, N. J.
**Rice, Samuel A. (45)**
Box 1178, Omaha 1, Nebr.
**Rice, Wallace S. (45)**
645 Long Lane, Upper Darby, Pa.
**Rice, Ward Jennings (20)**
5250 N. Pennsylvania St., Indianapolis 20, Ind.
**Rice, W. S. (49)**
Myrtle Creek, Oreg.
**Rich, Barney K. (47)**
514 Cohn, Houston, Tex.
**Richard, Clayton (46)**
39 McDonough St., Brooklyn, N. Y.
**Richards, Anna Cona (45)**
112 Madonna Pl., East Orange, N. J.
**Richards, E. Dwane (47)**
3818 Bowdoin St., Des Moines 13, Iowa.

**Richards, J. T. (39)**
Hq. Med. Fld. S. School, Fort Sam Houston, Tex.
**Richards, Josephine C. (49)**
148 Clairmont Terr., Orange, N. J.
**Richards, Leon W. (30)**
21500 S. Norwalk Rd., Artesia, Calif.
**Richards, Parke, Jr. (46)**
48 N. Spring Garden Ave., Nutley 10, N. J.
**Richards, R. Q. (40)**
1039 First St., Fort Myers, Fla.
**Richards, R. Q., Jr. (47)**
P. O. Box 631, Ft. Myers, Fla.
**Richards, Wesley J. (45)**
1251—3rd St., Santa Monica, Calif.
**Richards, Winfred C. (47)**
403 N. First St., Searcy, Ark.
**Richardson, J. Edward (41)**
1494 Edison Ave., Detroit, Mich.
**Richardson, Lloyd N. (26)**
Bel Air, Md.
**Richardson, Maynard C. (46)**
204 W. Michigan, Ypsilanti, Mich.
**Richardson, Thomas William (42)**
212 Second St., Westwego, La.
**Richardson, William A. (43)**
W. H. Goodale Co., 7 North Sussex St., Dover, N. J.
**Richenstein, Samuel J. (49)**
1022 S. W. Jackson, Portland 1, Oreg.
**Richey, Frank W., Jr. (46)**
1308 Rufer Ave., Louisville 4, Ky.
**Richey, James R. (49)**
4732—51st Place, S. W., Seattle 6, Wash.
**Richi, Daniel J. (49)**
204 State St., Hartford 3, Conn.
**Richie, Abe C. (49)**
1888 S. 11th East, Salt Lake City, Utah.
**Richman, Harry (44)**
6040 Highland Pl., West New York, N. J.
**Richmond, Moreland D. (47)**
1561 Bancroft Ave., San Leandro, Calif.
**Richoux, Edwin J. (46)**
3396 Roger William St., New Orleans, La.
**Richter, Laszlo (46)**
Blvd. M. Cervantes Saavedra 5, Mexico City, Mexico, D. F.
**Richter, Phillip J. (44)**
1239 Newton Ave. N., Minneapolis, Minn.
**Rickard, Chauncey E. (39)**
508 N. Third St., Harrisburg, Pa.
**Riddle, Donald D. (49)**
450 Clarendon Ave., Winter Park, Fla.
**Rider, Theodore, H. (33)**
6 Hosmer Rd., Concord, Mass.
**Ridolfo, Anthony S. (48)**
1845 Gerrard Ave., Columbus, Ohio.
**Riedesel, Carl C. (47)**
Idaho State College, Pocatello, Idaho.
**Riedinger, Edward (45)**
357 Stuyvesant Ave., Irvington N. J.
**Riedinger, Edward J., Sr. (49)**
42 Hillside Terrace, Irvington 11, N. J.
**Riegel, Maxwell S. (44)**
Riegel Pharmacy, Owego, N. Y.
**Riegelman, Sidney (45)**
Univ. of Calif. Coll. of Phcy., Medical Center, San Francisco 22, Calif.
**Rieger, Frank G. (47)**
Scotlandville Branch, Baton Rouge 5, La.
**Riesch, L. C. (37)**
7354 N. 20th St., Philadelphia 38, Pa.
**Rieveschl, George, Jr. (46)**
1416 Vernier Rd., Grosse Pointe Woods, 30, Mich.
**Rigby, I. A. (44)**
General Hospital, Spartanburg, S. C.
**Riggs, Leib L. (39)**
1138 S. W. Morrison, Portland 5, Oreg.
**Riggs, Sylvia W. (49)**
4201 S. W. Council Crest Dr., Portland 1, Oreg.
**Rigsby, E. P. (45)**
8665 Riverside Ave., Hollywood, Ill.

Rilander, Arthur (45)
Surrey Sportwear, 242 W. 36th St., New York 18, N. Y.
Riley, Charles A. (45)
301 N. Central, Glendale, Calif.
Riley, Charles W. (45)
224 Wilhoit Bldg., Springfield, Mo.
Riley, Harry H. (49)
Kenmore Apt. C4, 1105 S. E. First St., Evansville 10, Ind.
Riley, Louis (49)
1702 N. La Salle, Chicago, Ill.
Rilling, Werner H. (47)
5032 W. Burleigh St., Milwaukee 10, Wis.
Rimar, Stephen, Jr. (47)
14 Mary Ave., Fords, N. J.
Rimmer, Manuel T. (48)
Marlinton, W. Va.
Rimmer, Robert L. (48)
2209 Statesville Ave., Charlotte, N. C.
Rimondi, John C. (49)
1700 Central Ave., Union City, N. J.
Rinck, John L. (48)
967 Cherry St., San Carlos, Calif.
Rind, Dorothy P. (45)
5571 Neuman, Cypress, Calif.
Rinehart, Willa C. (47)
256–270 W. Cedar, Akron 7, Ohio.
Ringer, Ralph E. (49)
125 S. Main St., Bryan, Ohio.
Ringle, Philip (47)
4983 Hamilton St., Omaha 3, Nebr.
Ringwald, Ernest H. (46)
275 N. High St., Chillicothe, Ohio.
Rinn, Henry C. (37)
P. O. Box 497, Lodi, Calif.
Riordan, Alice Marie (47)
1850 Leighton Ave., Los Angeles 37, Calif.
Rios, Alfred R. (43)
115 N. W. 11th St., Mineral Wells, Tex.
Rios-Vega, Rosendo (45)
Box 2206 San Juan 10, P. R.
RIPPETOE, JOHN ROSS (07)
2557 Marion Ave., Bronx 58, N. Y.
Rippey, Stephens (47)
1232 National Press Bldg., Washington 4, D. C.
Rippon, J. Donald (47)
1300 W. Van Buren, Phoenix, Ariz.
Rippy, Beverly E. (46)
904 W. Main, Visalia, Calif.
Risalvato, Leonard (46)
440 Palisade Ave., Cliffside Park, N. J.
Rise, Herbert E. (47)
3422 Jefferson Ave., Des Moines 10, Iowa.
Riser, Everett C. (49)
2156 S. Kay, Tacoma 3, Wash.
RISING, LOUIS WAIT (27)
College of Pharmacy, Univ. of Washington, Seattle, Wash.
Risinger, John R. (48)
c/o J. J. Risinger, Boyce, Tex.
Ritch, George B., Jr. (47)
237 N. 78th St., Apt. 2, Birmingham, Ala.
RITCHIE, ALICE LUCILE (23)
2139 Auburn Ave., Christ Hospital, Cincinnati, Ohio.
Ritchie, James H. (48)
301 S. Ohio, Avalon, Pittsburgh, Pa.
Ritter, A. M. (47)
4135 W. Green Lea Pl., St. Louis 15, Mo.
Ritter, Henry L. (48)
406 Washington St., Allentown, Pa.
Ritter, Robert K. (45)
115 Princeton Blvd., Kenmore 17, N. Y.
Ritzlin, Philip (47)
3932 W. Wilcox St., Chicago 24, Ill.
Rivard, W. Henry (43)
Rhode Island College of Pharmacy and Allied Sciences, Providence, R. I.
Rivera, Adela (46)
756 Fox St., Bronx 55, N. Y.
Rivera, Raymond M. (47)
21 Loretta Ave., Fair Lawn, N. J.
Rivkin, Dan (45)
Hardin College, Wichita Falls, Tex.
Rivola, William E. (46)
197 Joralemon St., Belleville 9, N. J.

Roach, Idalle A. (47)
505 N. 8th St., Clinton, Okla.
Roach, Thomas (47)
126 N. Robinson, Oklahoma City 2, Okla.
Robart, Sophia (38)
45 Newbury St., Boston, Mass.
Robbins, Charles G. (49)
Box 995, Redmond, Oreg.
Robbins, Edward (45)
24 Marcy Pl., New York 52, N. Y.
Robbins, Kenneth D. (49)
11387 Montrose, Detroit 27, Mich.
Robbins, Samuel M. (47)
960 Rose Bldg., Cleveland 15, Ohio.
Robert, Edmond (49)
1962 Western Turnpike, Albany 3, N. Y.
Robert, Laurent F. (49)
Fruwirth Ave., Feeding Hills, Mass.
Robert, M. Noella (49)
1962 Western Turnpike, Albany, N. Y. (3)
Roberto, Gabriel C. (45)
8 Salem Rd., Paterson, N. J.
Roberts, Charles F. (46)
Lowell, Ind.
Roberts, Clyde N. (47)
25 Fairlax Dr., Huntington 1, W. Va.
Roberts, E. Darnegie (49)
959 Highland Terrace N. E., Atlanta, Ga.
Roberts, Eldon L. (49)
Tappahannock, Va.
Roberts, G. C. (45)
Greenwood, Miss.
Roberts, Henry J. (45)
81 N. Main, Concord, N. H.
Roberts, Jack A. (48)
1271—20th Ave., San Francisco 22, Calif.
Roberts, James W. (44)
129–133 W. Main St., Norfolk 10, Va.
Roberts, John G. (14)
137 N. Rolling Rd., Delaware County, Springfield, Pa.
Roberts, Kenneth V. (46)
4007 Harvard, Peoria, Ill.
Roberts, Orville J. (42)
3530 N. High St., Columbus, Ohio.
Roberts, Thomas (44)
Glidden, Iowa.
Roberts, William E., Jr. (46)
Box 203, Brooke General Hospital, Fort Sam Houston, Tex.
Robertson, Alma L. (45)
2510 E. 7th Ave., Vancouver, Wash.
Robertson, Donald M. (44)
21 Wellington Rd., Ardmore, Pa.
Robertson, F. R. (49)
2028 Central Ave., Indianapolis, Ind.
Robertson, Floyd A., Jr. (45)
Rt. 5, Box 234, Timber Lake, Lynchburg, Va.
Robertson, Henry P., Jr. (47)
1023 S. Walnut St., Hope, Ark.
Robertson, John T. (27)
1425 W. Garfield Blvd., Chicago, Ill.
Robertson, R. V. (45)
409 W. Riverside Ave., Spokane 8, Wash.
Robertson, Sara L. (48)
Rt. 3, Box 530, Olympia, Wash.
Robertson, William S. (48)
1737 Crevelia St., South Pasadena, Calif.
Robic, George W. (46)
4000 Penn Ave., Pittsburgh, Pa.
Robinson, Bert A. (49)
3031 Main, Marlette, Mich.
Robinson, Dolores (48)
621 S. Chester Rd., Box 234, Swarthmore, Pa.
Robinson, Donald B. (47)
Good Drug Co., Rockhill, S. C.
Robinson, Frank E. (46)
282 N. Market St., Dayton, Tenn.
Robinson, H. D. (49)
Box 231, Oregon City, Oreg.
Robinson, Harriett A. (49)
Charlotte Memorial Hosp., Charlotte 3, N. C.
Robinson, J. L. (48)
712 N. Springfield, Anthony, Kans.
Robinson, J. Linwood (44)
16 N. Main St., Belmont, N. C.

Robinson, James (49)
13332 McKinley Ave., Los Angeles 2, Calif.
Robinson, James F. (38)
6 E. Broadway, Salt Lake City, Utah.
Robinson, Manford J. (48)
c/o Smith, Kline & French Lab., 1530 Spring Garden St., Philadelphia, Pa.
Robinson, Paul C., Jr. (46)
2105 Perrysville, Ave., Pittsburgh 14, Pa.
Robinson, R. W. (46)
1464 Emerson St., Palo Alto, Calif.
Robinson, Samuel E. (49)
282 N. Market, Dayton, Tenn.
Robison, E. H. (44)
159 River St., Troy, N. Y.
Robnett, T. W. (48)
716 Main St., Oregon City, Oreg.
Roby, Calvin H. (49)
14724 Wemple Rd., Cleveland 10, Ohio.
Roca, Agustin (45)
655 Irene St., Santurce, P. R.
Rocchio, Thomas A. J. (39)
1570 Zerega Ave., New York 61, N. Y.
Roche, John F. (47)
Whitmire Drug Co., Whitmire, S. C.
Rochefort, Frank (43)
3721 S. Claiborne, New Orleans, La.
Rockman, Morris J. (46)
4102 Belle Ave., Baltimore 15, Md.
Roderick, John A. (46)
22 Pershing Ave., Titusville, Pa.
Rodgers, Frances (44)
3729 N. 45th St., Omaha, Nebr.
Rodgers, William F. (49)
Box 880, Anchorage, Alaska.
Rodriguez, Fernando L. (48)
Concordia St. No. 710, Santurce, P. R.
Rodriguez, José M. (41)
General Paz. 827, Tucuman, Argentina, S. A.
Rodriguez-Guzman, Jose A. (47)
22 Pastrana St., Rio Piedras, P. R.
Roe, Charles P. (46)
Vet. Adm. Regional Office, c/o Pharmacy, 1825 H St., N. W., Washington 25, D. C.
Roedel, Andy E. (46)
312 W. 17th St., Cheyenne, Wyo.
Roeder, Shirley F. (44)
255 Third N. W., Ephrata, Wash.
Roeg, Louis M. (34)
c/o Merck & Co., Inc., Rahway, N. J.
ROEHL, RUDOLPH J. (46)
4001 Shelby St., Indianapolis, Ind.
Roehm, Thomas C. (46)
R-2, New Richmond, Ohio.
Roehmheld, Lothar B. (49)
8004 Gridley, Wauwatosa 13, Wis.
ROEHR, C. M. (08)
583 24th St., Oakland, Calif.
Roenitz, James G. (46)
521 Michigan Ave., Sheboygan, Wis.
Roentsch, Elmer A. (49)
55 Main St., Keene, N. H.
Roeske, John F. K. (47)
Bldg. #1, Downey Veterans Hosp., No. Chicago, Ill.
Rogan, Jane L. (43)
2688 Casmere, Hamtramck 12, Mich.
Rogers, Bernard S. (46)
3663 St. Johns Ave., Jacksonville, Fla.
ROGERS, CHARLES HERBERT (14)
College of Pharmacy, Univ. of Minnesota, Minneapolis, Minn.
Rogers, Dan G. (46)
1507 Cedar Lane, Richmond, Va.
Rogers, J. L. (49)
The Central Pharmacal Co., Seymour, Ind.
Rogers, Leander Sims (45)
266 Highland, New Albany, Miss.
Rogers, Marlowe C. (49)
1766—25th Ave., Columbus, Nebr.
Rogers, Ralph P. (41)
202 N. Manguin St., Durham, N. C.
Roggeveen, Marguerite (28)
78 Cumberland Rd., West Newton, Mass.
Rogosa, Morris (47)
55 Cherry St., Lynn, Mass.

Rogowski, Edward C. (48)
James Monroe A-22, Presidential Gardens, Alexandria, Va.
Rohrer, Alfred H., Jr. (48)
6018—8th Ave., Kenosha, Wis.
Rohrer, Ed. E. (47)
Clyde, Ohio.
Rohrer, Marvin E. (49)
Gurley & Montezuma, Prescott, Ariz.
Roiz, Alphonse (48)
Box 3, Rio Hondo, Tex.
Roller, Horace J. (47)
303 Ninth Ave., Erwin, Tenn.
Rollins, Ernest W. (47)
N. C. Baptist Hospital, Winston Salem 7, N. C.
Rollins, Rex R. (47)
836 Wall St., Chico, Calif.
Rolnick, Abraham M. (46)
Gen. Del., Phoenix, Ariz.
Roman, Marie Alice (46)
828 Bridge St., N. W., Grand Rapids, Mich.
Romano, Joseph J. (47)
8701 Pritchard Pl., New Orleans 18, La.
Romano, Peter (47)
2540 Hudson Blvd., Jersey City 4, N. J.
Romano, Sam S. (48)
205 Broadway, Birmingham 9, Ala.
Romanoff, Isidor L. (49)
200 W. 70th St., New York 23, N.Y.
Romans, Margaret Foster (45)
185 Norwood Ave., Buffalo 13, N. Y.
Rombult, Julius B. (45)
P. O. Box 37, Lynnfield Center, Mass.
Romero, Manuel P. (43)
P. O. Box 2927, Habana, Cuba.
Romig, Emerson Van (27)
91 N. Main St., Keyser, W. Va.
Romney, Ruth P. (45)
52 W. 9th N., Provo, Utah.
Ronco, George S. (46)
122 N. 9th St., Bangor, Pa.
Ronning, Ole P. (40)
100 S. Phillips Ave., Sioux Falls, S. Dak.
Rooke, Ralph R. (47)
2929 Second Ave., Richmond 22, Va.
Rooney, Harry B. (48)
141 King St., San Francisco 7, Calif.
Roos, Robert V. (47)
3962 C. St., S. E., Washington 20, D. C.
Root, Charles T. (36)
Jacksonville State Hospital, Jacksonville, Ill.
Rosa, Jerry (47)
38 Drift St., Newark, N. J.
Rosa, Thomas J., Jr. (45)
176-41 80th Rd., Jamaica Estates, L. I., N. Y.
Rosado, Aurelio da Silva (26)
Caixa Postal No. 162, Para-Belem, Brazil.
Rosado, Filiberto D. (49)
803 Mariana Bracetti St., Stop 38½, Rio Piedras, P. R.
Rosado, Serapio R. (45)
P. O. Box 1291, San Juan 6, P. R.
Rosauer, Roland H. (43)
810 S. Spring St., Los Angeles 14, Calif.
Roscoe, E. E. (45)
Idaho State College, College of Pharmacy, Pocatello, Idaho.
Rose, Beulah S. (49)
221 E. 9th Ave., Johnson City, Tenn.
Rose, Clifton P. (45)
1150 7th St., Oakland, Calif.
Rose, E. J. (46)
P. O. Box 1566, Albuquerque, N. Mex.
Rose, Edward S. (23)
Box 182, Iowa City, Iowa.
Rose, Henry C., Jr. (47)
307 S. Central, Winona, Miss.
Rose, Ira Winfield (12)
411 E. Rosemary, Chapel Hill, N. C.
Rose, Ivan W. (47)
Flippin, Ark.
Rose, John O. (45)
Strecker Add., Marietta, Ohio.
Rose, Leonard (28)
2297 Second Ave., New York, N. Y.
Rose, William C. (43)
5707 W. Vernor Hgwy., Detroit, Mich.
Rose, William H. (43)
West Point, Miss.
ROSE, WILLIAM WILSON (18)
25 E. Walnut Ave., Westmont, N. J.
Roseman, Charles E., Jr. (47)
408 W. St. Clair, Cleveland 13, Ohio.
Rosemary, Arthur J. (49)
3096 Losantiville Ave., Cincinnati 13, Ohio.
Rosen, Arthur A. (48)
528 San Benito St., Los Angeles 33, Calif.
Rosen, Charles (46)
228 E. 38th St., Brooklyn 3, N. Y.
Rosen, Harry (31)
733 Eaton Rd., Drexel Hill, Pa.
Rosen, M. (41)
515 Lexington Ave., New York 17, N. Y.
Rosen, Milton W. (44)
1408 S. Independence, Chicago 23, Ill.
Rosenbaum, Helen Pupko (47)
1527 Washington Ave., Miami Beach 39, Fla.
Rosenbaum, Joel (47)
693 Pleasant Valley Way, West Orange, N. J.
Rosenbaum, Max (49)
1527 Washington Ave., Miami Beach 39, Fla.
Rosenberg, Alfred A. (46)
Beth Israel Hospital, Boston, Mass.
Rosenberg, Arnold J. (49)
2225 Dorothy Ave., Louisville 5, Ky.
Rosenberg, Charles (47)
3 Walden Pl., Louisville, Ky.
Rosenberg, Henry J. (49)
26 Christopher St., New York 14, N. Y.
Rosenberg, Herbert M. (46)
130-36 225th St., Laurelton, New York, N. Y.
Rosenberg, I. Charles (46)
820—14th St., Beaver Falls, Pa.
Rosenberg, I. E. (45)
624 N. Irving Blvd., Los Angeles 4, Calif.
Rosenberg, Joseph (49)
218 Chambers St., Boston 14, Mass.
Rosenberg, Julian (47)
405 E. 12th St., Chester, Pa.
Rosenberg, Louis (46)
4505 Argyle Terrace, N. W., Washington 11, D. C.
Rosenberg, Sidney Z. (45)
30209 W. Turner St., Philadelphia, Pa.
Rosenberger, D. Elvin (44)
1623 E. Darby Rd., Havertown, Pa.
Rosenberger, J. Mervin (47)
105 N. 5th St., Philadelphia 5, Pa.
Rosenberger, Virginia (46)
Park Court, Fox River Grove, Ill.
Rosenbloom, Jack H. (48)
101 S. Broadway, Baltimore 31, Md.
Rosenblum, Harold (36)
105 Donor Ave., East Paterson, N. J.
Rosenblum, William (49)
Washington Ave., Seaford, N. Y.
Rosenbluth, Martin H. (49)
54 Fielding Court, South Orange, N. J.
Rosenburger, Paul W. (46)
149 W. Jackson Blvd., Chicago, Ill.
Rosenfeld, Gizella (48)
1950 Parsons Ave., Columbus 7, Ohio.
Rosenfeld, Israel A. (48)
7187 Holabird Ave., Baltimore 22, Md.
Rosenfeld, Jacob (39)
1581 Watson Ave., Bronx, N. Y.
Rosenkotter, W. F. (41)
103 W. Main St., Pierce, Nebr.
Rosenshein, George (47)
117 State St., Perth Amboy, N. J.
Rosenstadt, Aaron (49)
1138 Harford Ave., Baltimore 2, Md.
Rosenstein, Morris (46)
84 Park Pl., North Plainfield, N. J.
Rosenthal, Maurice L. (47)
25 Manchester Rd., Tuckahoe 7, N. Y.
Rosenthal, Philip (43)
Metropolitan Hosp., 1903 Green St., Philadelphia, Pa.
Rosheim, Irwin E. (47)
530 Hill St., Ann Arbor, Mich.
ROSIN, JOSEPH (14)
824 Stelle Ave., Plainfield, N. J.
Rososky, Alton F. (48)
Box 135, Coalport, Pa.
Ross, Beatrice C. (44)
19027 Stanton Ave., Hayward, Calif.
Ross, Betty M. (44)
Shoals, Ind.
Ross, Donald H. (44)
438 Burlington Ave., Delanco, N. J.
Ross, Eldridge, C. (44)
Veterans Administration Hospital, Palo Alto, Calif.
Ross, Harry H. (28)
Medical & Dental Bldg., Fifth & Olive Sts., Seattle, Wash.
Ross, Lawrence E. (47)
303 S. Main St., Bluffton, Ind.
Ross, Samuel L. (39)
154 S. Berkley St., Kalamazoo, Mich.
Ross, Saul (49)
5842 Phillips Ave., Pittsburgh, 17 Pa.
Rosselli, Dino A. (48)
156 Otsego Ave., San Francisco 12, Calif.
Rosselli, John S. (48)
2432 Broadway, Redwood City, Calif.
Rossi, Frank P. (48)
535 San Anselmo Ave., San Anselmo, Calif.
Rossi, Joseph D. (48)
535 San Anselmo Ave., San Anselmo, Calif.
Rossillon, Laurens J. (46)
R. R. 2, Gridley, Kans.
Rossmoore, Harold W. (49)
1463 University Terrace, Ann Arbor, Mich.
Rost, William J. (49)
1600 Bryant, South St. Paul, Minn.
Rosvold, Sigurd D. (47)
7207 Rising Sun Ave., Philadelphia 11, Pa.
Roth, Edward J., Jr. (46)
1213 S. Market St., Canton 4, Ohio.
Roth, F. A. (48)
673 S. Las Robas, Pasadena, Calif.
Roth, H. Dale (46)
69 Selby Blvd., Worthington, Ohio.
Roth, Walter K. (45)
c/o McKesson & Robbins, Inc. Cedar Rapids, Iowa.
Rothe, William G. (49)
841 S. Wenonah Ave., Oak Park, Ill.
Rothenheim, C. A. (45)
112 Haven Ave., Apt. 32, New York 32, N. Y.
Rothman, Mark L. (44)
4958 York Rd., Philadelphia 41, Pa.
Rothmar, K. (40)
Ayerst, McKenna & Harrison, Ltd., Montee St. Laurent & St. Mathieu, Ville St. Laurent, P. Q., Canada
Rothrock, Ira Y. (47)
231 Main St., Mt. Vernon, Ind.
Rothrock, M. Jeanne (46)
232 Zimmerman Blvd., Kenmore 17, N. Y.
Rotondaro, Felice A. (46)
3729 B-Herbert Ave., Penn Manor Apts., Merchantville, 8 N. J.
Rotondi, Alphonse R. (49)
109 Union Ave., New Rochelle, N. Y.
Rotondo, Evelyn, (48)
428 Washington St., Bristol, Pa.
Rotz, Carl F. (46)
1310 C St., N. E., Washington D. C.
Rougon, Milton M. (42)
Chenal, La.
Rouse, Harlowe, M. (47)
Dale, Wis.
Roush, David W. (46)
2340 Vodeli St., Pittsburgh 16, Pa.
Roussin, Harold L. (44)
105 S. Mitchell St., Cadillac, Mich.
Rovers, John (49)
1221 Hampshire, Victoria, B. C. Canada.

Rowe, Edward J. (41)
5819 E. Washington St., Indianapolis 1, Ind.
Rowe, Ellis W. (45)
c/o Rowe & Co., 723 W. 26th St., Norfolk, Va.
Rowe, Frederic Irving (42)
87 Beekman Rd., Summit, N. J.
ROWE, LEWIS WILLIAM (17)
c/o Parke, Davis & Co., Detroit, Mich.
Rowe, Marley G. (45)
135 N. Main, Wichita, Kans.
Rowe, Tom D. (40)
1 Lincoln Ave., Newark 4, N. J.
Rowland, Ivan W. (46)
Gainsborough Apts. #102, 1017 Minor Ave., Seattle, Wash.
Rowland, N. D. (46)
Elizabeth, Pa.
Rowland, Wallace O. (46)
767 N. Main St., Akron 10, Ohio
Rowse, Edwin S. (44)
688 Third St., Beaver, Pa.
Rowse, Edwin S., Jr. (46)
1298 River Rd., Beaver, Pa.
Rowse, William Reed (46)
216 Chestnut St., Beaver, Pa.
Roy, Donna M. (47)
406 Birch St., Richland, Wash.
Roy, Shane (49)
101 S. Lafayette, Brownsville, Tenn.
Royce, Robert F. (49)
717 Varnum St., N. W., Washington, D. C.
Rozewski, Anthony (47)
3863 S. Howell Ave., Milwaukee 7, Wis.
Rubach, Stephen N. J. (46)
1325 Sycamore St., Buffalo 11, N. Y.
Rubelec, Jacquelin (47)
2221 E. 72nd St., Kansas City, Mo.
Rubens, Harry M. (48)
81 S. Fitzhugh St., Rochester 8, N. Y.
Rubens, Mabel Florence (45)
1394 Amherst St., Apt. 11, Buffalo 16, N. Y.
Rubenstein, Gertrude G. (29)
Rubenstein's Pharmacy, 4th at University, Seattle, Wash.
Rubin, Arthur (46)
1 Sumner Park, Rochester 7, N. Y.
Rubin, Gene L. (44)
Liberty Pharmacy, 2324 Liberty St., Trenton 9, N. J.
Rubin, Irving (41)
128 Marine Ave., Apt. 1-H, Brooklyn 9, N. Y.
Rubin, Melvin (46)
905 N. 13th St., Fargo, N. Dak.
Rubin, Paul P. (47)
2914 Line St., Apt. D, Camden, N. J.
Rubin, Philip (45)
4839 New Hampshire Ave., N.W., Washington 11, D.C.
Rubin, Samuel B. (47)
19 Riggs Rd., N. E., Apt. 105, Washington, D. C.
Rubin, Seldon L. (47)
1650—36th St., N. W., Washington, D. C.
Ruble, Roy C. (47)
1020 College, Siloam Springs, Ark.
Ruby, Samuel (43)
201 N. Main St., Wichita, Kans.
Rucker, Rollin B. (46)
c/o McKesson & Robbins Inc., P. O. Box 3010, Los Angeles 34, Calif.
Rudd, W. F. (16)
Medical College of Virginia, Richmond, Va.
Ruddick, John P. (39)
1705 M St., N. W., Washington 6, D. C.
RUDDIMAN, EDSEL ALEXANDER (94)
22179 Long Blvd., Dearborn, Mich.
Ruddy, A. Wayne (40)
Sterling-Winthrop Research Inst., Rensselaer, N. Y.
Rudeen, Carl John (47)
237 E. 7th St., St. Paul 1, Minn.
Ruder, Robert W. (48)
2964 Woolworth, Omaha, Nebr.
Rudert, Keith J. (46)
5309 S. Kingshighway, St. Louis 9, Mo.
Rudi, Francis M. (46)
3553 Crittenden St., St. Louis 18, Mo.
Rudibaugh, Adam P. (27)
116 W. Lincoln Way, Lisbon, Ohio.
Rudnicki, Joseph A. (49)
1289 Sycamore, Buffalo 11, N. Y.
Rudolph, Harry (47)
1719 Throckley Ave., Cleveland 20, Ohio.
Rudolph, I. Michael (47)
1836 Forest Hills Blvd., East Cleveland 12, Ohio.
Rudolph, Philip (45)
1024 Huron Rd., Cleveland 15, Ohio.
Ruebel, J. H. (45)
Barker, N. Y.
Ruel, Yvon J. (47)
6721—12th Ave., Rosemont, Montreal, Canada.
Ruettgers, Francis H. (46)
3055 Sussex Lane, Los Angeles 23, Calif.
Ruggiero, Julius C. F. (41)
54 Belmont Ave., Belleville, N. J.
Rugo, Louis (48)
22 N. Medina Ave., Youngstown 6, Ohio.
RUHL, HARRY FRY (02)
Box 236, Lancaster County, Manheim, Pa.
Ruhren, Joseph (46)
45 Mountain Ave., Westwood, N. J.
Rumford, William Byron (47)
1500 Stuart St., Berkeley 3, Calif.
Rumora, Rose M. (49)
80 Thompson Ave., Donora, Pa.
Rumore, Peter F. (45)
648 E. 51st St., Brooklyn, N. Y.
Rumps, William L. (47)
97 Delaware, Detroit 6, Mich.
Rundle, Laurance W. (48)
P. O. Box 68, Oxnard C., Calif.
Runsvold, Rolf C. (48)
136 S. Riverside, Rialto, Calif.
Runyan, Howard J. (49)
316 Edna, Toledo 9, Ohio.
Ruotolo, Angelo A. (43)
129 Putnam St., East Boston, Mass.
Rupp, Harlan E. (48)
905—2nd St., Santa Monica, Calif.
RUPP, WALDING, G. (18)
1955 Croswell Pl., Toledo 7, Ohio.
Rusby, Patricia (48)
Andover, N. J.
Ruse, Delores (47)
1010 Ave. D, Plattsmouth, Nebr.
Rush, Donald T. (48)
467 Bosworth St., San Francisco, Calif.
Rush, E. R. (49)
P. O. Box 1071, Martinsville, Va.
Russell, Hazen J. (49)
Park Ave., Lyndonville, Vt.
Russell, Jason L. (22)
Columbus Pharmacal Co., 326-336 Oak St., East, Columbus 15, Ohio.
Russell, Lillian L. (47)
8139 Traverse Ave., Detroit 13, Mich.
Russell, Miriam F. (45)
4107 Chester Ave., Philadelphia 4, Pa.
Russell, Percy R. (47)
547 Brookline Blvd., Havertown, Pa.
Russell, Ritchie A. (46)
111 Kilmarnock St., Mobile, Ala.
Russo, A. Jack (47)
466 Snediker Ave., Brooklyn 7, N. Y.
Russo, Carlo (47)
155 Anderson Ave., Fairview, N. J.
Russo, Frank V. (48)
288 Main St., Huntington, N. Y.
Russo, George A. (46)
822 N. Johnson, New Orleans, La.
Russo, Joseph V. (49)
30-24—92nd St., Jackson Heights, New York, N. Y.
Ruszel, Virginia (47)
10315 Calhoun Ave., Chicago 17, Ill.
Rutherford, Walter T. (44)
416 El Monte Way, Orosi, Calif.
Rutkin, Hyman (47)
640 E. 12th St., New York 9, N. Y.
Rutkin, Max (47)
640 E. 12th St., New York 9, N. Y.
Rutledge, John Stuart (24)
380 E. Exchange St., Akron, Ohio.
Rutman, Abraham (43)
101 Brantwood Rd., Worcester 2, Mass.
Rutsky, Oscar A. (47)
Substation 2, Hot Springs, Ark.
Ruttan, Carman (38)
2579 Portage Ave., Winnipeg, Manitoba, Canada.
Rutter, Albert V. (47)
402 N. 55th Ave. W., Duluth 7, Minn.
Ruud, H. N. (40)
12th & Jackson Sts., La Crosse, Wis.
Ruvinsky, Hyman (46)
622 Livonia Ave., Brooklyn 7, N. Y.
Ryan, Harold C. (47)
336 E. State St., Paxton, Ill.
Ryan, John E. (46)
1111 Perry Ave., Wichita 3, Kans.
Ryan, John P. (49)
145 Hudson St., Syracuse 4, N. Y.
Ryan, John W. (48)
c/o Ryan's Drug Store, Redwood City, Calif.
Ryan, Joseph I. (39)
597 E. 17th St., Brooklyn 26, N. Y.
Rybak, Raymond T. (46)
828 Nicollet Ave., Minneapolis 2, Minn.
Rychel, Richard L. (46)
143 Gregory Ave., Passaic, N. J.
Rykert, Glenn E. (46)
5952 Lucky Place, Detroit 11, Mich.

## S

Saager, John (45)
Heppner, Oreg.
SAALBACH, LOUIS, (07)
5620 Wellesley Ave., Pittsburgh 6, Pa.
Sabia, Dominick A. (46)
252 West Ave., Stamford, Conn.
Sable, Herbert O. (48)
583 Prospect Ave., West Hartford 5, Conn.
SACCAR, MICHAEL (05)
1700 Marshall, Houston 6, Tex.
Sacco, Charles C. (46)
2 Ocean Ave., Deal, N. J.
Sacharow, Norman (47)
329 W. Runyon St., Newark 8, N. J.
Sacher, George A. (46)
1430 Springfield Ave., Irvington 11, N. J.
Sachs, George (46)
68 Montclair Ave., Newark 8, N. J.
Sachs, John (46)
33 E. 208th St., Bronx 67, N. Y.
Sack, Melvin G. (48)
19 Deering Rd., Mattapan 26, Mass.
Sackin, Norman (47)
611 Sheffield Ave., Brooklyn 7, N. Y.
Sackmann, Charles J. (49)
1830 Flatbush Ave., Brooklyn 10, N. Y.
Sade, Joseph (47)
75 State St., Boston 9, Mass.
Saffo, Hamid (46)
Nineva, Abdulhamid Pharmacy, Mosul, Iraq
Safford, Ruth Eleanor (45)
132 Hearth St., Buffalo 14, N. Y.
Saffran, Emanuel (39)
7306 Metropolitan Ave., Middle Village, L. I., N. Y.
Safier, David H. (49)
13900 Wyoming, Detroit 4, Mich.
Safranck, Betty M. (45)
2927 N. 50th, Lincoln, Nebr.
Sager, Matthew J. (49)
12 Silver St., Dover, N. H.
Sager, Robert W. (46)
1023 Vermont Ave., Apt. 1, Pittsburgh 16, Pa.
Sah, Peter Pen-Tieh (47)
Univ. of California, College of Pharm., San Francisco, Calif.
Sahyun, Melville (44)
Rm. 282, La Arcada Bldg., Santa Barbara, Calif.
St. Louis, Eudore J. (49)
32 Lenox Circle, Lawrence, Mass.
St. Pierre, Anna Marie (42)
3445 Fifth St., Marrero, La.
Saiki, Toshio (48)
1933 Keyes, Madison 5, Wis.
Saito, Frank Taro (46)
1453 S. King St., Honolulu 46, T. H.

Sajeski, Arthur W. (45)
3621 N. Kevale Ave., Chicago 41, Ill.
Sakal, Elizabeth H. (46)
1616 California Ave., McKeesport, Pa.
Salameno, Charles (49)
7-17 Fair Lawn Ave., Fair Lawn, N. J.
Salamone, Lawrence F. (49)
1210 Massachusetts Ave., N. W., Washington 5, D. C.
Salanitro, Alfred A. (47)
142 Bloomfield Ave., Bloomfield, N. J.
Saldin, E. M. (44)
217 N. 25th Ave., Yakima, Wash.
Salero, William A. (47)
911 Pierre, Manhattan, Kans.
Salfield, H. (49)
19 Valley Rd., White Plains, N. Y.
Salinas, Cesar (47)
Box 27, Roma, Tex.
Salisbury, Rupert (49)
84-12—252 St., Bellerose, L. I., N. Y.
SALKOVER, BENEDICT (25)
404 S. 4th St., St. Louis 2, Mo.
Salquist, H. W. (48)
Merds & Co., 703 Market, San Francisco, Calif.
Salter, Vernon L. (44)
1944 Parkdale St., Toledo, Ohio.
Saluc, Lotar (46)
6103 Woodside Ave., Woodside, N. Y.
Salven, Charles E. (48)
2776 Mark Breit, Cincinnati 9, Ohio.
Salzberg, Emanuel (47)
201 Ivy St., Newark, N. J.
Salzman, Sidney J. (47)
Box 323 S. Main St., Centerville, Calif.
Sambuco, Gaetano (47)
25 Overhill Rd., Upper Darby, Pa.
Samet, Gustav (47)
607 E. Allegheny Ave., Philadelphia 34, Pa.
Sammons, Phanuel (46)
Box 1579, Grand Coulee, Wash.
Sampson, Melvin (46)
98 A Francis St., Everett 49, Mass.
Sampson, W. L. (34)
2148 Gamble Rd., Westfield, N. J.
Sams, J. F. (49)
350 Elizabeth St., Pekin, Ill.
Samuelson, Oscar (28)
3304 Bateman Ave., Baltimore 16, Md.
Sanchez, Edna (47)
Box 147, Rio Piedras, P. R.
Sanchez, Nilo G. (49)
Villa D'Este Hotel, Miami 36, Fla.
Sanchez-Borges, Luisa (44)
San Mariano 562, Altos, Reparto Mendoza, Vibora, Havana, Cuba.
Sandene, Clarence L. (49)
125 Chestnut St., Frostburg, Md.
Sander, Wesley R. (49)
Box 398, Edcouch, Tex.
Sanders, Franklin P. (47)
Box 133, Smithville, Tenn.
Sanders, Harold J. (45)
34 N. Main St., St. Albans, Vt.
Sanders, I. Newton (46)
3906 City Terrace Dr., Los Angeles 33, Calif.
Sanders, N. Vere (38)
228 S. Broadway, Albert Lea, Minn.
Sandifer, Hinson L. (46)
R. F. D. 1, Tylertown, Miss.
Sandler, Jacob (42)
355 Seymour Ave., Newark 8, N. J.
Sandler, Pearl J. (45)
125 Lewis St., Perth Amboy, N. J.
Sandler, Sylvan (47)
7277 Cornell, University 5, Mo.
Sandles, William W. (46)
1000 Chartiers Ave., McKees Rock, Pa.
San Filippo, Joseph Anthony (46)
155 Ave. U, Brooklyn, N. Y.
Sanford, D. D. (44)
106 John St., Brooklyn 1, N. Y.
Sanford, Roy L. (44)
Enid, Okla.
Santelli, John S. (46)
411 Manhattan Ave., Brooklyn 22, N. Y.
Santillan, Procesa G. (47)
1065 Cavite St., Manila, P. I.
Santoni, David A. (46)
3520 E. Lombard St., Baltimore 24, Md.
Santoro, Ernest L. (48)
30 Park St., Lawrence, Mass.
Santos, Julio C. (49)
Box 243, Humacao, P. R.
Santos, Manuel (46)
3419 Broadway, New York 31, N. Y.
Sapida, John W., Jr. (48)
714 Grandview Ave., East Pittsburgh, Pa.
Saposnik, Rubin (48)
5316 S. Kimbark Ave., Chicago 15, Ill.
Sappe, Milton J. (39)
1184 Washington Blvd., Baltimore, Md.
Sappia, Silvio A. (41)
271 Walker St., Fairview, N. J.
Sarandria, Dorothy V. (46)
912 Russelwood Ave., Mckees Rocks, Pa.
Sarin, Badri (49)
Hazel Nook, 137, Kurla Road, Andheri, Bombay, India.
Saron, Robert (48)
Mound Park Hospital, St. Petersburg, Fla.
Sarrazin, Jack (49), 1165 Lafayette St., Denver, Colo.
Sarubin, Milton (48)
Main St., Ellicott City, Md.
Sarven, George W. (49)
2300—7th St. N., St. Petersburg 4, Fla.
Sashihara, Carol (44)
2076 W. 30th St., Los Angeles 7, Calif.
Sass, Harry L. (46)
West Point, Nebr.
Sasser, Beverly Jean (46)
8039 Interlake Ave., Seattle 3, Wash.
Sasser, Robert D. (46)
401 S. Aliso, Albuquerque, N. Mex.
Sasso, Eugene (42)
532 Blvd., Kenilworth, N. J.
Sasso, Rita A. (41)
532 Blvd., Kenilworth, N. J.
Sater, Edwin S. (42)
P. O. Box 324, Pasadena, Calif.
Sather, Victor A. (47)
P. O. Box 156, Silverton, Oreg.
Satin, Jerome C. (49)
1703 Union St., Brooklyn 13, N. Y.
Sauber, Solomon (43)
2429 Ontario Ave., Niagara Falls, N. Y.
Sauerberg, Walter J. (48)
611 S. 9th Ave., Maywood, Ill.
Sauerborn, Eugene J., Jr. (49)
79 Concord Ave., Union, N. J.
Saults, Claude H. (49)
175 Main St., Gordon, Nebr.
Saunderson, Norman A. (46)
Menahga, Minn.
Savage, J. L. (39)
311 Park Pl., Charlottesville, Va.
Savina, Anthony R. (43)
53 Prospect St., Stamford, Conn.
Savitz, Percy J. (47)
5745 Woodland Ave., Philadelphia 43, Pa.
Sawyer, John R. (30)
367 Centre St., Jamaica Plain, Mass.
Sax, Sylvan M. (45)
1224 Peermont Ave., Pittsburgh 16, Pa.
Saxe, Milton (49)
184 Washington Ave., Chelsea 50, Mass.
Saylor, Paul LeRoy (47)
486 Chalmers, Detroit 15, Mich.
Scacciaferro, Anthony L. (35)
269 Powers St., New Brunswick, N. J.
Scala, Gerald R. (49)
52 Hudson Ave., East Orange, N. J.
Scaletta, Josephine B. (46)
524 Briar Pl., Chicago 14, Ill.
Scallan, Donald A. (47)
Golden Meadow, La.
Scandroli, Angelo C. (48)
1122 Greenwood Ave., Rockford, Ill.
Scanlon, John J., Jr. (46)
37 E. Caly Ave., Roselle Park, N. J.
Scarani, A. Julian (48)
Main St., Newport, N. J.
Scariano, John Thomas (47)
310 S. Oak, Hammond, La.
Scattergood, George (46)
Armstrong Cork Co., Glass Enclosure Div., Lancaster, Pa.
Scelfo, Anthony A. (47)
58-25—187 St., Flushing, N. Y.
Scerebini, Eugene E., Jr. (45)
Harlem Valley State Hospital, Wingdale, N. Y.
Schaaf, Harry E. (46)
112 S. I St., Aberdeen, Wash.
SCHAEFER, CHARLES HENRY (09)
Ft. Myers Beach, Fla.
Schaefer, Emil A. (44)
135 N. Commercial St., Salem, Oreg.
Schaefer, Emil, Jr. (46)
881 Dorian Rd., Westfield, N. J.
Schaefer, Frederick (17)
205 Monitor St., Brooklyn 22, N. Y.
SCHAEFER, HUGO H. (16)
600 Lafayette Ave., Brooklyn, N. Y.
Schaefer, Kenneth (45)
3627 Paule Ave., St. Louis 23, Mo.
Schaefer, Norbart A. (49)
1225 St. James Blvd., Apt. 1, Evansville, Ind.
Schaefer, Paul J. (47)
8213 Hillside Rd., Cleveland 9, Ohio.
Schafer, Charles H. (49)
113 S. Main, North Canton, Ohio.
SCHAFFER, CHARLES (03)
1309 Louisiana St., Vallejo, Calif.
Schaffer, Charles F. (43)
Hope Chapel Rd., Lakewood, N. J.
Schaffer, Leo L. (47)
Winsted, Minn.
Schaible, L. A. (39)
Box 552, South Norwalk, Conn.
Schamach, Charles (30)
518 Park Ave., Paterson, N. J.
Schapiro, Harry S. (48)
2029 W. North Ave., Baltimore 17, Md.
Scharringhausen, George L. (49)
110 Main St., Park Ridge, Ill.
Schatz, Sidney J. (46)
2485—11th Ave., S., Birmingham, Ala.
Schauer, Carl (46)
202 Broadway, Bayonne, N. J.
Schauer, Jacob (48)
2565 E. 21st, Brooklyn 29, N. Y.
Schauermann, Karl R. (41)
1011 W. Montclaire Ave., Milwaukee 9, Wis.
Schectman, Abraham (49)
1389 S. W. 22nd Terrace, Miami, Fla.
Scheel, Richard Walter (47)
1510 37th Ave., N., Seattle, Wash.
Scheffe, Walter Phillip (49)
113 E. Randolph, Enid, Okla.
Scheffrin, Richard E. (47)
4560—3rd St., S. E., Washington, D. C.
Scheindlin, Stanley (44)
1349 Passmore St., Philadelphia, Pa.
Scheiner, Norman (48)
148 Broadway, Hicksville, L. I., N. Y.
Schellack, Luckey Carl (47)
404 Bond St., P. O. Box #147, Monett, Mo.
Scheller, Leander George (46)
5889 Amboy Rd., Prince Bay, N. Y.
Schenk, Albert M. (47)
P. O. Box 16, Hays, Kans.
Scherer, Chester M. (46)
3561 Maybury Rd., Detroit 8, Mich.
SCHERMEISTER, LEO J. (46)
2016 7th Ave., Maywood, Ill.
Schermerhorn, John W. (43)
School of Pharmacy, George Washington Univ., Washington, D. C.
Scherretz, Wallace L. (46)
2257 Benefit St., New Orleans, La.
Scherzer, Sidney A. (44)
461 S. 14th St., Newark, N. J.
Schick, Joseph A. (45)
2072 Grove St., San Francisco 17, Calif.
Schicks, George Charles (21)
66 Dryden Rd., Upper Montclair, N. J.
Schieber, Charles A. (49)
R. R. 2, Bucyrus, Ohio.
Schieffelin, Wm. Jay, Jr. (27)
P. O. Box 7, Station "D," New York, N. Y.
Schiff, Eugene (45)
BIO Brands Div., 80 Montgomery, Jersey City, N. J.

Schiff, Harry D. (46)
Main St., Masontown, W. Va.
Schifferdecker, Ernest C. (49)
1623 Bonnycastle Ave., Louisville 5, Ky.
Schifferdecker, George A. (46)
1623 Bonnycastle Ave., Louisville 5, Ky.
Schiffman, Arthur (47)
1407 Morris Ave., Union, N. J.
Schiffman, Martin (49)
1374 College Ave., Bronx 56, N. Y.
Schilke, Audrey B. (46)
63 Spring Lane, Englewood, N. J.
Schill, Robert K., Jr. (49)
269 A S. Harrison St., B-3, East Orange, N. J.
Schill, Robert K., Sr. (43)
2314 Mountian Ave., Scotch Plains, N. J.
Schiller, Bernard J. (46)
811 S. Aiken Ave., Pittsburgh 6, Pa.
Schiller, Fred (46)
600 S. Negley, Pittsburgh, Pa.
Schimpf, Fred W., Sr. (46)
Centre Square, Orwigsburg, Pa.
Schindler, Herbert (49)
342 E. Shedaker St., Philadelphia 44, Pa.
Schine, Samuel (46)
881 Lafayette St., Bridgeport 4, Conn.
Schippers, John G. (47)
1149 Tamarack, Grand Rapids, Mich.
Schipplein, Albert F., Jr. (46)
7904 St. Charles Ave., Apt. E-1, New Orleans 18, La.
Schlakman, Irving A. (44)
1367 East 8 St., Brooklyn 30, N. Y.
Schlamp, Gilmore M. (46)
1537 N. Temple Ave., Indianapolis 1, Ind.
Schlan, George L. (48)
5012 N. Troy, Chicago 25, Ill.
Schleif, Robert H. (47)
619 Langdon St., Madison, Wis.
Schlein, Albert (46)
1764 Bergen St., Brooklyn 33, N. Y.
Schlembach, Robert J. (47)
122 E. High St., Defiance, Ohio.
Schlenker, Claude E. (48)
805 Atlantic Ave., Atlantic City, N. J.
Schlepfer, Charles (46)
4508 Bergen Turnpike, North Bergen, N. J.
Schlesinger, James F. (46)
10 E. 10th St., New York 3, N. Y.
Schlesinger, Seamon (48)
4636 N. 10th, Philadelphia, Pa.
Schleuse, L. W. (31)
Box 1659, San Antonio 6, Tex.
SCHLICHTING, ARTHUR FLOYD (13)
425 Tiffin Ave., Ferguson, Mo.
Schlichting, Harold E. (23)
Haslett, Mich.
Schliebe, Rheinhardt F. (47)
Fremont, Wis.
Schlinkmann, Paul Ernst (47)
3716 Arkansas Ave., St. Louis 18, Mo.
Schlossberg, Elias (42)
2500 E. Van Buren, State Hospital, Phoenix, Ariz.
Schlosser, Theodore H. (49)
Lock Drawer 25, Chewelah, Wash.
Schlotterer, Ray C. (42)
220 Fifth Ave., New York, N Y.
Schluessel, Elmer E. (46)
219 Ellis, Kewaunee, Wis.
Schlumberger, Anna Babette (13)
1332 Broadway, Denison, Iowa.
Schlumberger, Chester R. (40)
1332 Broadway, Denison, Iowa.
Schmetterling, Irving (45)
1256 E. 13th St., Brooklyn 30, N Y.
Schmid, Frederick W. (47)
8 West Railroad Ave., Tenafly, N. J.
Schmid, Harold H. (46)
30 E. 111th St., Chicago 28, Ill.
Schmidler, Alois J. (45)
1502 Calumet Dr., Sheboygan, Wis.
Schmidt, A. Elsa (49)
1704 Michigan Ave., Logansport, Ind.
Schmidt, Adelbert C. (47)
2949 N. Maryland, Milwaukee 11, Wis.
Schmidt, Arthur M. (48)
615 E. Front St., Plainfield, N. J.
Schmidt, Carl A. (22)
114 W. Fifth St., Dayton, Ohio.
Schmidt, Charles J. (47)
1600 S. Charles St., Baltimore 30, Md.
Schmidt, John F. (49)
4152 Belmar Ave., Toledo 12, Ohio.
Schmidt, Robert C. (49)
460 Chestnut St., Minonk, Ill.
Schmidt, Warren H. (48)
710½ S. Metcalf St., Lima, Ohio.
Schmitt, Julius T. (45)
556 Parsells Ave., Rochester 9, N. Y.
Schmitz, H. Paul (44)
150 Field Pt. Rd., Greenwich, Conn.
Schmitz, Raymond Edward (43)
512–75th St., Niagara Falls, N. Y.
Schmucker, Rudolph A. (44)
4 N. Minnesota St., New Ulm, Minn.
Schmuelling, Harry G. (43)
N. W. Cor. 4th & Broadway, Cincinnati, Ohio.
Schnabel, Madeline T. (45)
Deaconess Hosp., 563 Riley Ave., Buffalo, N. Y.
Schnaper, Morton J. (39)
2800 Woodley Rd., N. W., Washington, D. C.
Schnayerson, Benjamin (47)
386 E. 26th St., Paterson 4, N. J.
Schneeberger, Paul J. (48)
4221 Florida Ave., Cincinnati 23, Ohio.
Schneeberger, Werner F. (49)
367 Amazon Ave., Cincinnati 20, Ohio.
Schneider, Abraham Louis (44)
5801 Lotus Ave., St. Louis, Mo.
Schneider, Adela (43)
Southern Pacific Hospital, Houston, Tex.
SCHNEIDER, EARL W. (43)
500 Washington Ave., S. E., Minneapolis 14, Minn.
Schneider, Frank H. (49)
722 Seminary, Kansas City, Kans.
Schneider, Fremont E. (45)
657–59 W. 79th St., Chicago 20, Ill.
Schneider, Howard E. (46)
356 Frebis Ave., Columbus 6, Ohio.
Schneider, John C. (49)
1801—38th St., Rock Island, Ill.
Schneider, John P. (25)
32 Front St., Berea, Ohio.
Schneider, Maxwell M. (49)
344 Jackson Ave., Jersey City, N. J.
Schneider, Phillip C. (49)
165 Belmount Ave., North Arlington, N. J.
Schneider, Sidney G. (45)
177 Libert St., Bloomfield, N. J.
Schneider, Stanley T. (47)
2309 Cleveland Blvd., Granite City, Ill.
Schneider, W. E. H., Jr. (40)
90 Engle St., Englewood, N. J.
Schneider, William M. (47)
278—16th Ave., Newark 3, N. J.
Schneidewind, Dean A. (47)
Marissa, Ill.
Schneller, George H. (40)
American Cyanamid Co., Calco Chemical Division, Bound Brook, N. J.
Schnorbus, Alice H. Flavin (46)
351 N. Warren St., Trenton 8, N. J.
Schoen, R. C. (47)
1041 Summit North, Seattle 2, Wash.
Schoenberger, H. Robert (46)
555 Salem Ave., Dayton 6, Ohio.
Schoenholzer, Emil (45)
23 N. 27th St., Billings, Mont.
Schoenknecht, George (49)
1232 Wilson Dr., Eau Claire, Wis.
Schoetzau, Harrison M. (47)
131 Hudson St., Hoboken, N. J.
SCHOETZOW, RAY E. (20)
909 Rose Dr., Whittier, Calif.
Schofield, Edith M. (36)
P. O. Box 662, Atlantic City, N. J.
Scholl, Frederick M. (46)
5735 Springfield Ave., Philadelphia, Pa.
SCHOLZ, OSCAR (09)
131 Wilson Ave., Newark, N. J.
Schoonover, Norman F. (45)
521 W. Madison, Washington, Iowa.
Schor, Raymond E. (48)
1569 Helen Drive, Los Angeles 33, Calif.
Schowalter, Jacob (49)
1701 N. Humboldt, Milwaukee 2, Wis.
Schrager, Bernard (49)
2005 Uyse Ave., Bronx 100, N. Y.
Schramm, Arthur R. (49)
507 Ravine Manor, Highland Park, Ill.
Schraub, Charles F. (44)
26 Maynard Rd., Dedham, Mass.
Schreiber, Arthur T. (49)
2108 Lowell Ave., Louisville, Ky.
Schreiber, Benjamin (45)
2 N. Vermont Ave., 2nd Fl., Atlantic City, N. J.
Schreiber, Charles D. (42)
Tell City, Ind.
Schreiber, Marie (46)
Irwin & Potter Drug, Anthony, Kans.
Schreiber, Robert J. (46)
501 Main St., Tell City, Ind.
Schreier, Hugo P. (46)
2501 E. Main St., Columbus 9, Ohio.
Schreiner, J. David (47)
719 W. 12th St., Anderson, Ind.
Schreiner, Robert (46)
117 W. Seventh St., Plainfield, N. J.
Schrepel, John W. (47)
305 S. Main St., Pratt, Kans.
Schroeder, B. C. (49)
3100 E. Central, Albuquerque, N. Mex.
Schroeder, Helen F. (30)
Box 248, Kiowa, Kans.
Schroeder, Marvin K. (46)
1302 N. Eclipse Pl., South Bend, Ind.
Schroeder, Nelson R. (46)
1382 W. 9th S., Cleveland 1, Ohio.
Schroeter, Clarence R. (45)
1825 Calumet Dr., Sheboygan, Wis.
Schuelke, Floyd (49)
851 E. 82nd, Chicago, Ill.
Schug, David D. (47)
R. R. 3, Marcellus, Mich.
Schuler, Edward E. (46)
1059 Bedford, Grosse Pointe 30, Mich.
Schulich, Mitchell B. (46)
2170 E. 7th St., Brooklyn 23, N. Y.
Schultejann, B. H. (49)
818 First Ave., Silvis, Ill.
Schulten, M. H. (49)
2916 S. 4th St., Louisville, Ky.
Schultheis, Joseph L. (49)
653 E. Florida St., Evansville, Ind.
Schultz, Benjamin (38)
200 W. 16th St., New York, N. Y.
Schultz, Benjamin (49)
246 Oakhurst Rd., Elberon, N. J.
Schultz, Erich A. (47)
2101 W. Center St., Milwaukee 6, Wis.
Schultz, Ernest C. (47)
103 N. Ludington St., Columbus, Wis.
Schultz, Frederick C. (47)
3235 N. Abingdon St., Arlington, Va.
Schultz, John J. (47)
1014 Park Ave., Columbus, Wis.
Schultz, Stanley A. (47)
2006 S. 17th St., Milwaukee 4, Wis.
Schultz, Walter Albert (47)
1137 Emerald St., Madison, Wis.
Schultz, Walter J. (43)
2218 N. 3rd St., Milwaukee 12, Wis.
Schultze, Robert F. (47)
20th & Madison Ave., Covington, Ky.
Schulz, Ernest R. (46)
40-33 23rd St., Long Island City 1, N. Y.
Schumacher, George H. (47)
c/o Walgreens Drug, Fort Smith, Ark.
Schumacher, Raymond (49)
759 Summer Ave., Newark, N. J.
Schumack, Selig D. (46)
55 Trantor Pl., Staten Island 2, N. Y.
Schumaker, Henry A. (45)
c/o Florine's, Cuba City, Wis.
Schuman, Edward (46)
2103 E. Tuscarawas St., Canton 4, Ohio.
Schumm, Frederick Albert (47)
3906 Mt. Pleasant Ave., Baltimore, Md.
Schupach, Aaron, (45)
1410 Argyle, Chicago, Ill.
Schutt, L. Vernon (48)
4844—73rd St., La Mesa, Calif.
Schuur, Martin (46)
17820 S. Elaine, Artesia, Calif.

Schwab, Marvin (48)
1802 S. Drake, Chidago 23, Ill.
Schwabe, Edward L. (40)
Brocton, N. Y.
Schwaba, Mildred A. (48)
3600 W. Diversey, Chicago 47, Ill.
Schwafel, Lawrence N. (46)
413—2nd St. East, Sonoma, Calif.
Schwartau, Neal W. (43)
303-C Keeley St., Fort Snelling, St. Paul 11, Minn.
Schwarting, Arthur E. (45)
Univ. of Conn., College of Pharmacy, New Haven, Conn.
Schwartz, Alvin (47)
102 Annapolis Blvd., N.E., Glen Burnie 9, Md.
Schwartz, Aron (49)
820 Linwood, Louisville, Ky.
Schwartz, Charles (46)
310 Livingston Terrace, S. E., Apt. 6, Washington 20, D. C.
Schwartz, Charles O. (48)
4360 Stanton Ave., Pittsburgh 1, Pa.
Schwartz, David J. (47)
1950 Washington Ave., Bronx 57, N. Y.
Schwartz, Evelyn (44)
1305 Park Blvd., Camden, N. J.
Schwartz, Harry A. (48)
12701 Shaker Blvd., Cleveland 20, Ohio.
Schwartz, Henry (47)
919 S. Keeler Ave., Chicago 24, Ill.
Schwartz, I. (14)
157 W. Hudson St., Long Beach, N. Y.
Schwartz, John T. (46)
Washington & Chesapeake Aves., Towson 4, Md.
Schwartz, Julius M. (48)
1565 Odell St., New York 62, N. Y.
Schwartz, Leslie (46)
88 Chestnut St., Salem, N. J.
Schwartz, Simon Michale (47)
4642 Whittier Blvd., Los Angeles, Calif.
Schwartz, Stanely L. (47)
1382—7th Ave., San Francisco, Calif.
Schwartz, William (46)
Earl Place, New Providence, N. J.
Schwartz, William (49)
3101 Woodward, Detroit 1, Mich.
Schwarz, Hubert E. (46)
611 Ridge St., Bowling Green, Ohio.
Schwarz, Ira I. (46)
Hotel Suburban, East Orange, N. J.
Schwarz, Joel J. (45)
800 S. 11th St., Newark 8, N. J.
Schwarz, Normand G. (48)
327 Calumet Bldg., Miami, Fla.
Schwarz, Sylvan S. (46)
26 Colgate Rd., Maplewood, N. J.
Schwarzschild, Walter (47)
66 Romaine Ave., Jersey City 6, N. J.
Schwatka, W. Herdman, Jr. (46)
2300 Edmondson Ave., Baltimore 23, Md.
Schweger, Edwin S. (38)
100 S. Broadway, Green Bay, Wis.
Schweitzer, Frank J. (37)
2567 Bank St., Louisville, Ky.
Schweitzer, Houston B. (49)
539 Fleetfoot St., Dayton, Ohio.
Schwerman, William W. (48)
8 Howard Ave., White Plains, N. Y.
Scigliano, John A. (47)
1543 Poplar Grove St., Baltimore 16, Md.
Sciuchetti, Leo A. (41)
School of Pharmacy, Oregon State College, Corvallis, Oreg.
Sclafano, Joseph A. (45)
260 Sheffield Ave., Brooklyn, N. Y.
Scofield, J. W. (31)
613 E. Main St., Shelbyville, Ky.
Scoles, Charles C. (43)
1283 Poplar St., Denver 7, Colo.
Scorrano, Jean B. (45)
14 Maul St., New Rochelle, N. Y.
Scott, Anthony L. (35)
269 Powers St., New Brunswick, N. J.
Scott, Claude G. (49)
Palace Drug Store, Idabel, Okla.
Scott, Edmund M. (48)
Apt. 12, 2052 E. 88th St., Cleveland 6, Ohio.
SCOTT, EVLYN GRAY (35)
1938 E. 116th St., Apt. 45, Cleveland 6, Ohio.
Scott, Ewell F. (48)
850 Warfield Ave., Oakland 10, Calif.
Scott, Harry R. (48)
Box 527, Elkins, W. Va.
Scott, J. P. (39)
c/o Eli Lilly & Co., Indianapolis, Ind.
Scott, Jack E. (48) 2244 W. Main St., Houston 6, Tex.
Scott, Julius Cornelius (46)
17904 Norwood St., Detroit 12, Mich.
Scott, Kenneth R. (46)
Humansville, Mo.
Scott, Marilyn (49)
359—71st St., Niagara Falls, N. Y.
Scott, Morton W. (49)
176 E. 176th St., New York, N. Y.
Scott, Paul M. (42)
Route 4, Monticello, Ind.
Scribner, William Arthur (43)
2498 E. Colorado St., Pasadena, Calif.
Scruggs, Gloria (45)
281 Marion Ave., Spartanburg, S. C.
Scruggs, James L., Jr. (47)
Marion, Ala.
Sevrcek, John C. (49)
110 W. 18th, Austin, Tex.
SEABURY, E. R. (25)
New Brunswick, N. J.
Seabury, Harry E. (46)
3 Whitehouse Ave., Roosevelt, L. I., N. Y.
Seagull, Melvin J. (46)
164 Pomona Ave., Newark, N. J.
Seal, Charles E. (45)
Muhlenberg Hosp., Plainfield, N. J.
Searle, John G. (26)
P. O. Box 5110, Chicago 80, Ill.
Searle, Lyle C. (41)
Hieber Drug Co., 222 Main St., Cedar Falls, Iowa.
Sears, Carroll B. (48)
933 S. McDonough St., Decatur, Ga.
Sears, W. E. (44)
8037 S. E. Stark, Portland 16, Oreg.
Seaton, Layke L. (49)
26 S. E. 65th, Portland 16, Oreg.
Seay, James E. (46)
111 S. Bolton St., Jacksonville, Tex.
Sebald, William W. (42)
Manawa, Wisconsin.
Sebek, Roy Otto (43)
1906 S. Euclid Ave., Berwyn, Ill.
Seberg, Edward W. (46)
217 N. 13th St., Marshalltown, Iowa.
Secreto, Mary Jane (49)
423 Jackson Ave., Vandergrift, Pa.
Secrist, John A., Jr. (44)
Box 957, Windham, Ohio.
Sedlak, Joseph A. (49)
400 Palisade Ave., Jersey City, N. J.
Seeberg, Victor P. (47)
Cutter Laboratories, 4th & Parker Sts., Berkeley 1, Calif.
Segal, Julius (49)
1901 Delaware Ave., Wilmington 49, Del.
Segal, Mervin (49)
1522 Murray Ave., Pittsburgh 17, Pa.
Seger, Linus V. (46)
220 Main, Peshtigo, Wis.
Segura, Jacob S., Sr. (39)
407 Franklin, Mansfield, La.
Seiberlich, L. E. (39)
Box 186, Minneapolis 1, Minn.
Seibert, W. L. (27)
468 Dewitt St., Buffalo, N. Y.
Seidel, Henry G. (46)
127 Westminster Ave., Greensburg, Pa.
Seidler, Alexander (17)
16 Orange St., Newark, N. J.
Seidler, Walter (49)
14701 Milverton Rd., Cleveland 20, Ohio.
Seidman, Morris W. (44)
Box 332, Framingham, Mass.
Seif, Dale (33)
1314 Fayette Pl., Plainfield, N. J.
Seif, Irving K. (48)
2516—85th St., Brooklyn, N. Y.
Seifert, Benjamin J. (47)
Sherburn, Minn.
Seigle, Benjamin (47)
142 Hunterdon St., Newark, N. J.
Sein, Francisco R. (42)
Box 3951, Santurce, P. R.
Seitz, Martha M. (45)
1574 W. Harrison, Freeport, Ill.
Seitz, Russell T. (46)
Box 791 San Angelo, Tex.
Seitzinger, R. L. (46)
c/o Seitzinger's Drug Store, Freeland, Pa.
Selby, Charles V. (37)
411 W. Main St., Clarksburg, W. Va.
Seldeen, Martin (49)
11401 Georgia Ave., Wheaton, Md.
Seldin, Isadore (37)
c/o Langston Pharmacy, 2401 Benning Rd., N. E., Washington, 2, D. C.
Selhorst, Conrad J. (46)
1408 Roger Young Village, Los Angeles 27, Calif.
Selvagn, Herman C. (49)
862 Asbury Ave., Ocean City, N. J.
Semeniuk, Fred (42)
School of Pharmacy, Univ. of North Carolina, Chapel Hill, N. C.
Semon, Thomas E. (48)
P. O. Box 135, 806 S. Madison St., Pt. Clinton, Ohio.
Sencindiver, Judson H. (46)
Cockeysville, Md.
Senechal, George A. (49)
108 Commonwealth Ave., New Britain, Conn.
Senerchia, Aldo V. (45)
1205 Main St., West Warwick, R. I.
Senff, Donald (47)
Boyd Drug Store, Wooster, Ohio.
Senft, Betty J. (46)
1334 Goodale Ave., Toledo 6, Ohio.
Serbia, A. L. (48)
Utuado, P. R.
Seres, Paul (47)
7514 Green Hill Rd., Philadelphia 31, Pa.
SERLES, EARL R. (20)
808 S. Wood St., Chicago 12, Ill.
Serrano, Manuel A. (45)
9 Mendez Vigo St., Mayaguez, Puerto Rico.
Seubert, Alphonse A. (47)
1684 Page St., San Francisco 17, Calif.
Severson, Donald L. (48)
Waiklin Pharmacy, Grand Island, Nebr.
Seward, Charles R. (38)
1151 S. Oakland Ave., Pasadena, Calif.
SEYBERT, JOHN EDWARD (16)
4842 Kenwood Ave., Indianapolis 8, Ind.
Seydel, G. L. (46)
246 W. Third St., Davenport, Iowa.
Seyfarth, George A. (46)
Medical Arts Pharmacy, 411 Akron Savings & Loan Bldg., Akron, Ohio.
Seyffert, Edward R. (45)
2343 Paris Ave., S. E., Grand Rapids, Mich.
Shacklett, Lorain (49)
3636 A South Jefferson, St. Louis, Mo.
Shadley, Bayard M. (47)
3510 University, c/o Ward Drug Store, Des Moines, Iowa
Shafer, Albert J. (47)
5830 Kennerly Ave., St. Louis 12, Mo.
Shafer, T. Guy (49)
843 Longridge Rd., Oakland 10, Calif.
Shafer, William H. (42)
244 S. Main St., Old Forge, Pa.
Shaff, Harry R. (49)
45 E. Main St., Salineville, Ohio.
Shah, Hasmukhlal, C. (47)
Katakiawad, Kalapur, Ahmedabad, India.
Shaikun, Mayer (49)
2800—S. 4th St., Louisville 8, Ky.
Shainholtz, Wilbur E. (47)
2002 Missouri Ave., Omaha 7, Nebr.
Shalit, Nathan (46)
29 Budd St., Morristown, N. J.
Shangraw, William B. (45)
58 Center St., Rutland, Vt.

Shank, Earl E., Jr. (49)
304 Wills Rd., Connellsville, Pa.
Shank, William R. (46)
120 Main Ave., S. W., Warren, Ohio.
Shapero, Rosalie (48)
Pharmacy Dept., Beth Israel Hospital, Boston, Mass.
Shapinsky, Sidney C. (47)
1226 S. Evans Ave., Evansville 13, Ind.
Shapiro, Isidor (46)
77 Spruce St., Newark 3, N. J.
Shapiro, Lester (38)
851 Main St., Buffalo 14, N. Y.
Shapiro, Maurice D. (45)
235 Main St., Nashua, N. H.
Shapiro, Max (46)
158 Boerum St., Brooklyn 6, N. Y.
Shapiro, Sol (43)
1713 Quarrier St., Charlestown, W. Va.
Sharawara, Walter H. (44)
809 Hill St., Whitinsville, Mass.
Sharkey, Amelia K. (48)
1858 W. 95th St., Chicago 43, Ill.
Sharp, Tom C. (43)
3401 Gallatin Rd., Nashville, Tenn.
Sharp, Tom C., Jr. (47)
1117 Kirkland Ave., Nashville, Tenn.
Sharpe, Thomas Hughes (47)
21681 Highwood Ct., Ferndale 20, Mich.
Sharrow, Philip J. (49)
554 S. Lewi, Columbus, Wis.
Shasky, Henry G. (41)
8234 N. Peninsular Ave., Portland 3, Oreg.
Shassholin, Igor G. (49)
427—16th Ave., San Francisco 18, Calif.
Shattuck, Paul S. (31)
322 Neal Ave., Ironton, Ohio.
Shaughnesy, Mary Elizabeth (47)
2012 Brownsville Rd., Pittsburgh 10, Pa.
Shaw, Irving Franklin (45)
c/o Vitarine Co., 636 11th Ave., New York 19, N. Y.
Shaw, J. Donald (49)
1149 Hamilton St., Allentown, Pa.
Shaw, J. H. (49)
220 Wells, Renton, Wash.
Shaw, John D. (45)
43 N. 15th St., Allentown, Pa.
Shaw, Mrs. Lynwood E. (47)
421 Lake Ave., St. Louis 8, Mo.
Shaw, Oscar (47)
3100 Brighton 7th St., Brooklyn 24, N. Y.
Shaw, William D. (46)
Van Patten Pharmaceutical Co., 1227 Loyola Ave., Chicago 26, Ill.
Shawyer, J. Earl (48)
1014 Park Ave., Laramie, Wyo.
Shay, J. Arthur (47)
c/o Scholl Mfg. Co., Inc., 213 W. Schiller St., Chicago, Ill.
Shea, Arthur J. (45)
202 Rock St., Fall River, Mass.
Shea, John W. (46)
Memorial Hospital, Cumberland, Md.
Shea, Robert F. (48)
General Delivery, Hanford, Calif.
Shea, Timothy S. (36)
390 Main St., Worcester, Mass.
Shea, Virginia Mary (46)
76 Fairmont Ave., Worcester 4, Mass.
Shead, Almon A. (47)
3208 S. Logan Ave., Milwaukee 7, Wis.
SHEARER, OSCO (29)
Station Hospital, 4106 Area Service Unit New Orleans, La., P.O.E.
Shecter, Sidney H. (47)
1514 57th St., Brooklyn 19, N. Y.
Shedd, John G. (48)
229 Church, Tekonsha, Mich.
Sheehan, William Francis (47)
559 Main St., Winchester, Mass.
Sheehy, Maurice Wm. (38)
P. O. Box 1735, Miami 35, Fla.
Sheets, Charles E. (46)
Elgin, Nebr.
Sheffield, Evert O. (46)
3812 West Beach, Gulfport, Miss.
Shehorn, Norval L. (47)
515 Parker Ave., Monrovia, Calif.
Shelby, Dorothy W. (47)
603 E. 3rd, Ellensburg, Wash.
Shelley, Donald Gene (45)
Box 68, Herculanium, Mo.
Shelton, George E. (43)
Box 598, Eagle Pass, Tex.
Shemerdiak, Lodik (46)
2656 N. Sayre Ave., Chicago 35, Ill.
Shenburg, Myriam (44)
c/o Hadar Pharmacy, Masaryk Square, Haifa, Israel.
Shenkarow, L. E. (47)
221 E. Ninth St., Tucson, Ariz.
Shepard, Samuel (47)
1785 Seward, Detroit 6, Mich.
Shepard, William D. (47)
14 N. Michigan Ave., Chicago 2, Ill.
Shepherd, L. A. (40)
916 W. Franklin St., Richmond 20, Va.
Shepherd, Mary I. (36)
210 E. Pearson, Chicago, Ill.
Sheridan, Sidney O. (46)
3519½ W. Manchester Blvd., Inglewood, Calif.
Sherk, Waldemar (49)
4348 Oakland Ave., Minneapolis 7, Minn.
Sherman, Harold (46)
111 Magnolia St., Hartford 5, Conn.
Sherman, Harold G. (46)
464 Ash St., Brockton 16, Mass.
Sherman, Jacob (46)
126 W. Main St., Chattanooga 8, Tenn.
Sherman, John F. (49)
247 Cooper Pl., New Haven, Conn.
SHERMAN, LOUIS C. (46)
342 N. Water St., Milwaukee 2, Wis.
Sherman, Max (45)
7 Rockingham Dr., Toledo, Ohio.
Sherman, Nancy Jane (45)
625 Toronto Ave., Toledo 9, Ohio.
Sherman, Ralph A. (49)
2012 W. Earll Dr., Phoenix, Ariz.
Sherrin, Harry I. (47)
620 Princeton Ave., Bluefield, W. Va.
Sherwood, Richard R. (44)
2469 S. Taylor Rd., Cleveland Heights 18, Ohio.
Shestack, Robert (43)
Director, Dept. of Physical Therapy, Washington County Hospital, Hagerstown, Md.
Shibel, Joseph Anthony (45)
Lawrence General Hospital, Lawrence, Mass.
Shield, E. J. (47)
10000 S. Vermont, Los Angeles 44, Calif.
Shields, Dwight M. (45)
4414 Fir Lane, Toledo 12, Ohio.
Shields, Earl T. (45)
Marshfield, Mo.
Shields, Joe J. (49)
Box 907, Wellington, Tex.
Shier, Henry H. (49)
Box 1570, Ruidoso, N. Mex.
Shigaya, Mary S. (46)
106½ First Ave. S., Seattle 4, Wash.
Shillingburg, Laurance E. (48)
Motor Route B., Lamesa, Tex.
Shilman, Avner (46)
57 Achad Haam St., Tel-Aviv, Israel.
Shimon, Doris R. (47)
1821 W. Wisconsin, Milwaukee 3, Wis.
Shindler, O. C. (45)
Bandon, Oreg.
Shine, Joseph J. (39)
Central Pharmaceutical Journal, 221 N. La Salle St., Chicago 1, Ill.
Shiner, E. T. (40)
Front Royal, Va.
Shiner, H. H. (49)
130 South Ave., Petersburg, Va.
Shinkai, John H. (44)
College of Pharmacy, Loyola Univ., New Orleans 18, La.
Shipley, Oran G. (49)
422 Old Farm Rd., Pittsburgh 16, Pa.
Shipman, John K. (47)
7315—23rd Ave., Kenosha, Wis.
Shirkey, Harry C. (41)
314 B Elland Circle, Cincinnati 29, Ohio.
Shirley, John C. (46)
321 Main Ave., Brookings, S. Dak.
Shirley, Lyle M. (48)
4601 Park Blvd., San Diego 3, Calif.
Shively, T. William (47)
R. D. #1, East Stroudsburg, Pa.
Shkolnik, Samuel (25)
105 W. Adams St., Chicago, Ill.
Shlifer, Bella L. (49)
5306 University Ave., Chicago 15, Ill.
Shoaf, Edwin A. (47)
1226 W. 36th St., Indianapolis, Ind.
SHOEMAKER, C. S. (26)
Elmira, N. Y.
Sholty, L. Don (49)
Nutrilite Prod. Inc., Buena Park, Calif.
Shook, Frank M. (49)
908 Oak Hill Ave., Hagerstown, Md.
Shor, Josif (43)
26, Adah Haam St., Tel-Aviv, Israel.
Shore, Lee (48)
749 West Chester Blvd., Westchester, Ill., P. O. Maywood, Ill.
Shore, Rubin L. (47)
4380 Coleridge St., Pittsburgh 1, Pa.
Short, John A., Jr. (47)
24 Raymond Ave., Pattonville, Mo.
Shostak, John (45)
321 Glenbrook Rd., Glenbrook, Conn.
Showalter, Carl G. (43)
Broadway, Va.
Showalter, Mildred E. (48)
301 E. Chalmers, Champaign, Ill.
Shrake, Donald R. (49)
1143 E. Dayton, Madison 3, Wis.
Shuffett, Garnett L. (49)
Greensburg, Ky.
Shuler, Ernest F. (47)
Holly Hill, S. C.
Shuler, Franklin G. (48)
20 Main, Bowman, S. C.
Shull, Edwin M. (46)
4501 Hopkins St., Dallas, Tex.
Shulman, Emanuel V. (47)
400—13th St., N. E., Washington 2, D. C.
Shultz, Albert H. (48)
3596 Blanche, East Cleveland 18, Ohio.
Shultz, Beatrice E. (47)
245 N. Broadway, Green Bay, Wis.
Shuman, Benjamin H. (45)
151 Salem St., Medford 55, Mass.
Shumsky, Olga (47)
149 Berkeley, Toronto 2, Ont., Canada.
Shumway, Ronald A. (47)
623—37th St., West Palm Beach, Fla.
Shuster, Ralph (47)
c/o Shuster's Drug Stores, Inc., 427 Lyons Ave., Newark 8, N. J.
Shuttie, Andrew M. (47)
1409 Jefferson St., Muskegon Hts., Mich.
Shuttleworth, Earl C. (47)
1507 Portage Ave., South Bend 16, Ind.
Sica, Albert J. (36)
2800 University Ave., New York 63, N. Y.
Sick, Paul Eric (37)
Belgrano 3655, Buenos Aires, Argentina.
Sidelman, Sidney (48)
425 Main St., Poughkeepsie, N. Y.
Sideri, Catherine N. (48)
4417 Baltimore Ave., Philadelphia 4, Pa.
Sidle, John H. (47)
Alexandria, S. Dak.
Siebrandt, Martin J. (47)
2757 S. Kedvale Ave., Chicago 23, Ill.
Siegel, Carlton S. (45)
901 Nebraska Ave., Toledo 7, Ohio.
Siegel, Frederick P. (49)
16 Spring St., South Norwalk, Conn.
Siegel, Gilbert H., Sr. (49)
1968 Richmond Rd., Toledo 7, Ohio.
Siegel, Julius (46)
163 French St., New Brunswick, N. J.
Siegel, Milton M. (46)
85 Central Ave., White Plains, N. Y.

Siegel, Morris (46)
3034 Coney Island Ave., Brooklyn 24, N. Y.
Sielaff, Phyllis (49)
Omro, Wis.
Siess, Lee C. (43)
P. O. Box 287, Alexandria 2, La.
SIEVERS, ARTHUR (06)
Plant Industry Station, Beltsville, Md.
Sievers, Manuel U. (47)
72 S. Grove Ave., Elgin, Ill.
Sigloch, Henry L. (49)
3004 N. W. 28th, Oklahoma City, Okla.
Sigsbury, Robert M. (48)
2016—41st St., North Bergen, N. J.
Sigurjonsdottir, Ingibjorg (46)
Hafnarfjordur Apotek, Hafnarfjordur, Iceland.
Silber, Ida Efros (48)
Gallinger Hospital, Washington, D. C.
Silber, Samuel (41)
184 Crann St., Hillside, N. J.
Silbergleit, Abraham H. (42)
1703 E. 174th St., New York, N. Y.
Silberman, Julius (46)
5034 Cottage Grove Ave., Chicago 15, Ill.
Siler, Douglas A. (49)
100 Hale St., Osceola, Ark.
Siler, Louise (45)
715 W. 8th St., Anderson, Ind.
Siler, Wm. A., Jr. (49)
R. R. 4, Lafayette, Ind.
Silk, Joseph C. (46)
409 State, Perth Amboy, N. J.
Silk, Ruth D. (48)
66 Livingston Ave., Arlington, N. J.
Silken, Herman H. (46)
6362 Ebdy St., Pittsburgh 17, Pa.
Silsby, J. Norman (45)
3843 Blaisdell Ave., Minneapolis 8, Minn.
Silva, Rafael N. (45)
87-17—102nd St., Apt. D-4, Richmond Hill, N. Y.
Silver, Edward N. (48)
785 Forest Rd., New Haven 15, Conn.
Silver, Howard (43)
578 Newark Ave., Jersey City 6, N. J.
Silver, Jack (48)
4227 W. Ave. 41, Los Angeles 41, Calif.
Silver, Samuel L. (42)
1908 Duquesne Ave., Richmond 21, Va.
Silverman, Alfred W. (48)
1403 Nelson Ave., Bronx 52, N. Y.
Silverman, Robert D. (47)
P. O. Station A, Ogdensburg, N. Y.
Silverman, Samuel (44)
11 Beacon St., Boston, Mass.
Silverman, Samuel (46)
601 Herron Ave., Pittsburgh 19, Pa.
Silverman, Saul (48)
60-71 Myrtle Ave., Glendale 27, N. Y.
Silverman, Sylvan B. (44)
1001 N. Broadway, Baltimore 5, Md.
Silversides, Franklin H. (48)
139 Borebank St., Winnipeg, Manitoba, Canada.
Silverstein, Fred (46)
2999 W. 29th St., Brooklyn 24, N. Y.
Silverstein, Irwin (48)
4946 N. 8th St., Philadelphia 20, Pa.
Silverstein, Louis (46)
941 Washington Ave., Brooklyn 25, N. Y.
Silverstein, Phillip S. (47)
3322 W. Grand Ave., Detroit 6, Mich.
Sim, Stephen K. (48)
4323—12th Ave., N. E., Seattle 5, Wash.
Simeone, Salvador J. (46)
2463 Burgundy St., New Orleans, La.
Simi, Alfred (45)
257 19th Ave., San Francisco 21, Calif.
Simkunas, Adolph (40)
12770 Pinehurst, Detroit 4, Mich.
Simmons, R. H. (45)
29 Cantrell Ave., Harrisonburg, Va.
Simms, L. Fields (49)
Leadwood, Mo.
Simnacher, Ernest J. (45)
Div. Comm. Office, U.S. Pub. Health Serv., Federal Security Bldg., Washington, D. C.
Simon, Albert (45)
65 Central Park Ave., Yonkers 5, N. Y.
Simon, Benjamin (48)
1748 Chislett St., Pittsburgh 6, Pa.
Simon, Catherine M. (45)
Bristol Laboratories, Syracuse 1, N. Y.
Simon, Harry (49)
4741 N. 8th St., Philadelphia 20, Pa.
Simon, Irving (47)
1816 Crotona Park E., New York 60, N. Y.
Simon, Jack (48)
4116 Edwards Rd., #13, Cincinnati 9, Ohio.
Simon, Nathan P. (48)
302 Grant St., Buffalo 13, N. Y.
Simone, Rose Mary (42)
23-22 31st Dr., Long Island City 2, N. Y.
Simonian, Vartkess H. (37)
37 Lee St., Apt. 11, Cambridge 39, Mass.
Simons, Jasper E. (47)
2601 N. Downer Ave., Milwaukee 11, Wis.
Simons, Philip J., Jr. (45)
211 W. Water St., Syracuse 1, N. Y.
Simonson, Irving H. (38)
61 Main St., Marathon, Wis.
Simpson, Claude R. (48)
1401 Chestnut, Long Beach 6, Calif.
Simpson, Clinton L. (48)
c/o Simpson's Drug Store, Prescott, Wis.
Simpson, Joseph B. (40)
1513 Central Ave., Louisville 8, Ky.
Simpson, Louise F. (43)
325 W. 31st St. Apt. 2, Norfolk, Va.
Simpson, Nathan A. (35)
131 S. Second St., Maimisberg, Ohio.
Simpson, Russell E., Jr. (47)
Box 292, Virginia Beach, Va.
Simpson, W. Martin, Jr. (48)
Lederle Labs. Div., Amer. Cyanamid, Room 6234, 30 Rockefeller Plaza, New York 20, N. Y.
Simpson, Wesley E. (49)
364 Fundy Dr., Saint John West, N. B., Canada.
Sims, Calvin C. (49)
Cash Drug Store, Dotham, Ala.
Sims, J. C. (46)
Allison Park, Pa.
Sinakin, Richard M. (47)
2 Webster Ave., Jersey City 7, N. J.
Singer, Alineda M. (47)
517 W. 8th Ave., Gary, Ind.
Singer, Arnold J. (46)
299 Clinton Ave., Newark, N. J.
Singer, Harold B. (47)
411 N. Collington Ave., Baltimore 31, Md.
Singer, Reuben C. (48)
N. E. Cor. 19th & 72nd Ave., Philadelphia 26, Pa.
Singler, Charles H. (49)
2232 Montana Ave., Santa Monica, Calif.
Singman, Henry D. (47)
6304 North Capitol St., N. W., Washington 11, D. C.
Sinkhorn, Warren E. (46)
273 E. Tallmadge Ave., Akron 10, Ohio.
Sinner, E. M. (48)
Box 1228, Fargo, N. Dak.
Sinton, Russell L. (46)
3399 S. Stafford St., Arlington, Va.
Sippel, Albert C. (46)
15365 Marlowe Ave., Detroit 27, Mich.
Siracuse, J. J. (45)
186 Vermont St., Buffalo 13, N. Y.
Siragusa, Josephine M. (47)
Howard College, Dept. of Pharmacy, Birmingham, Ala.
Sirhal, Michael (44)
136 Starr, Phoenixville, Pa.
Siro, Anthony F. (49)
44 Main St., Rockaway, N. J.
Sirois, Paul J. (46)
140 Davis, Wyandotte, Mich.
Sirota, Leonard (46)
185 Avenue C, New York 9, N. Y.
Sisk, Thomas E. (46)
2140 E. Erie Ave., Lorain, Ohio.
Sister Agatha (38)
145 Guerrero, Mary's Help Hospital, San Francisco, Calif.
Sister Agnella, (49)
840 S. Webster Ave., Green Bay, Wis.
Sister Agnes FitzSimmons (34)
St. Agnes Hospital, Baltimore, Md.
Sister Agnes Veronica Lunney (49)
St. Mary's Hospital, 2500 S. 6th St., Minneapolis, Minn.
Sister Agnetta Bird, (48)
St. Francis Hospital, Litchfield, Ill.
Sister Alice Bear (47)
9th and Exchange, St. Paul 2, Minn.
Sister Alice Loretta (46)
St. Joseph Hospital, Far Rockaway, N. Y.
Sister Alphonse Marie McKinzie (47)
St. Francis Hosp., Blue Island, Ill.
Sister Ambrose Devine (47)
923 Powell St., St. Joseph 19, Mo.
Sister Anna de Sales (37)
St. Raphael's Hospital, New Haven, Conn.
Sister Anna Marie (49)
Hilcrest Dr., San Diego 3, Calif.
Sister Anne (36)
St. Joseph Hospital, Lexington 13, Ky.
Sister Anne Gallagher (48)
449 Winneconnae Parkway, Chicago 20, Ill.
Sister Aurore Roux (42)
St. Mary's General Hospital, 318 Sabattus St., Lewiston, Me.
Sister Barbara Marie Reusing (47)
St. Agnes Hospital, Philadelphia, Pa.
Sister Barbara Nealen (49)
6420 Reisterstown Rd., Baltimore 15, Md.
Mother Bartholomew Vendriglia (45)
227 E. 19th St., New York 3, N. Y.
Sister Beatrice Martin (34)
St. Leo's Hospital, Greenboro, N. C.
Sister Beda of St. Francis (45)
1500 Broadway, Quincy, Ill.
Sister Bernadette Bauer (48)
840 S. Webster Ave., Green Bay, Wis.
Sister Blanche Sindzenski (48)
St. Francis Hospital, Litchfield, Ill.
Mother Bonaventure Bertocchi (46)
2548 Lakeview Ave., Chicago 14, Ill.
Sister Carmelita Reisch (48)
St. Francis Hospital, Washington, Mo.
Sister Catherine Gardner (27)
St. John's Hospital, Lowell, Mass.
Sister Cecile (47)
St. Francis Convent, Springfield, Ill.
Sister Cecilia Mary (45)
175 E. 68th St., New York 21, N. Y.
Sister Cecily Jordan, (48)
St. Anthony's Hosp., Effingham, Ill.
Sister Clarissa (43)
306 High St., Newark, N. J.
Sister Clarita Decker (45)
2117 Carson St., Pittsburgh, Pa.
Sister Constance Marie Tracy (49)
St. Josephs Hospital, Stamford, Conn.
Sister Cora Miriam (45)
155 Dean St., Brooklyn 2, N. Y.
Sister Crescentia (36)
Nazareth Hospital, Mokemah Junction E. I. Ry, Patna District, India.
Sister Cunigundis DeMers (46)
St. Elizabeth's Hospital, 328 W. Lincoln St., Belleville, Ill.
Sister Daniel J. McMahon (49)
900 Water St., Hancock, Mich.
Sister Dolores Girault (47)
1014 N. Stanton, El Paso, Tex.
Sister Edith (32)
Emergency Hospital, 108 Pine St., Buffalo, N. Y.
Sister Editha (37)
St. Peter's Hospital, Brooklyn, N. Y.
Mother Edward (39)
Frank Cuneo Hospital, 4420 N. Clarendon Ave., Chicago 40, Ill.
Sister Elizabeth Joseph (43)
St. Mary's Hospital, Tucson, Ariz.

Sister Emerenziana Call (45)
1200 W. Cabrini St., Chicago 7, Ill.
Sister Emma Bertrand H. (42)
1572 Cambridge St., Holy Ghost Hospital, Cambridge, Mass.
Sister Eusebia (46)
St. Vincent's Hospital, Green Bay, Wis.
Sister Eustacia Rancati (45)
1019 Madison St., Seattle 4, Wash.
Sister Florence (42)
The Troy Hospital, 87 Oakwood Ave., Troy, N. Y.
Sister Florence Mason (37)
St. Paul Hospital, 3121 Bryan St., Dallas, Tex.
Sister Frances de Paul (44)
Halifax Infirmary, Halifax, Nova Scotia, Can.
Sister Frida Anna Wente (47)
2100 S. College Ave., Philadelphia 30, Pa.
Sister Gladys Robinson (41)
2200 W. Kilbourn Ave., Milwaukee 3, Wis.
Sister Gracia Ebenger (48)
Sacred Heart Hosp., Eau Claire, Wis.
Sister Hilda Groeninger (44)
89 Genesee St., Rochester 11, N. Y.
Sister Hildegarde Bierman (43)
423 S. Walnut St., Taylorville, Ill.
Soeur Imelda des Anges (49)
Hospital St. Jean de Dieu, Montreal, Canada.
Sister J. Fisette (41)
337 Notre Dame Ave., Manchester, N. H.
Sister Jane Frances (38)
c/o St. Margaret's Hospital, 812 Adams St., Montgomery, Ala.
Sister Jean Louise (49)
12th & Magnolia Sts., Louisville 10, Ky.
Sister Jeanne Marie (37)
St. Elizabeth's Hospital, Youngstown, Ohio.
Sister Joanna (37)
DeFaul Hospital, St. Louis, Mo.
Sister John Miriam (38)
Mercy Hospital, Mt. Vernon, Ohio.
Sister Joseph Marie Schuerman (38)
St. Mary's Infirmary, 1536 Papin St., St. Louis 3, Mo.
Sister Joseph Wilfred (45)
St. Joseph's Hospital, Three Rivers, Quebec, Can.
Sister Julianne Stencil (48)
St. John's Hosp., Springfield, Ill.
Sister Julienne Gribben (49)
715 E. Grand, Albuquerque, N. Mex.
Sister Laura Stricker (44)
U. S. Marine Hospital, Carville, La.
Sister Laurina Klein (40)
St. Anthony Hospital, 1021 S. 6th St., Terre Haute, Ind.
Sister Liguora (46)
Saint Nicholas Hospital, Sheboygan, Wis.
Sister Leonissa Woletz (47)
220 S. Webster St., Decatur, Ill.
Sister Lillian Hurth (48)
St. Mary's Hospital, Streator, Ill.
Sister Loretta (43)
St. Francis Hospital, E. 142nd St., New York 54, N. Y.
Sister Louise Boswell (32)
215 Decatur St., Cumberland, Md.
Sister Louise de Paul O'Brien (37)
Pittsburgh Hospital Assoc., Frankstown Ave., Pittsburgh, Pa.
Sister Lydia (37)
Providence Hospital, Washington, D. C.
Sister M. A. Blanchette (43)
St. Peter's General Hospital, New Brunswick, N. J.
Sister M. Amadeus Mulcahy (45)
2537 S. Prairie Ave., Chicago 16, Ill.
Sister M. Ancilla (46)
St. Joseph's Hospital, 316 John St., Hamilton, Ont., Canada.
Sister M. Angela (46)
St. Joseph's Hospital, Bellingham, Wash.
Sister M. Ann Elizabeth Bowne (47)
St. Francis Hospital, Poughkeepsie, N. Y.
Sister M. Anselma Betzen (39)
826 N. 8th St., Estherville, Iowa.
Sister M. Beatrix Eisenmenger (46)
1310 W. Charles St., St. Francis Hospital, Grand Island, Nebr.
Sister M. Benedicta Kuyven (40)
St. Joseph Hospital, St. Charles, Mo.
SISTER M. BERNADETTE HOGAN (23)
St. Eugene Hosp., Dillon, S. C.
Sister M. Blanche Noe (47)
1545 S. Layton Blvd., Milwaukee 4, Wis.
Sister M. Celestine (46)
611 Edgecombe Ave., New York 32, N. Y.
Sister M. Chrysostoma (49)
Sacred Heart Hospital, Allentown, Pa.
Sister M. Clara Francis (40)
St. Francis Convent, Mishawaka, Ind.
Sister M. Clotilde Schumann (45)
928 N. Emporia, Wichita 5, Kans.
Sister M. Constantina (46)
St. Anthony Hospital, Michigan City, Ind.
Sister M. Corona (44)
3520 Chippewa St., St. Louis, Mo.
Sister M. Cosma Wetli (45)
St. Francis Hospital, Beech Grove, Ind.
Sister M. Dentis Bost (45)
S. Mercer and Phillips Sts., New Castle, Pa.
Sister M. Dulciana (44)
St. Mary's Hospital, Centralia, Ill.
Sister M. Edwardilla Vianco (47)
St. Elizabeth Hospital, Lafayette, Ind.
Sister M. Eileen (Van Ackeren) (43)
W. 16th & Quitman St., St. Anthony's Hospital, Denver, Colo.
Sister M. Emerentia Reising (47)
St. Anthony Hosp., Carroll, Iowa.
Sister M. Emmelia Fischer (47)
185 Hazel St., Oshkosh, Wis.
Sister M. Eugenia (46)
Loretta Rest Home, E. Glenn & Brighton Ave., Syracuse 5, N. Y.
Sister M. Euphrosina Braig (43)
1401 S. Main St., Fort Worth, Tex.
Sister M. Felicitas (47)
St. Josephs Hospital, Beaver Dam, Wis.
Sister M. Fidelis (44)
811 Forest Ave., Omaha, Nebr.
Sister M. Francine Hensler (45)
St. Francis Hospital, 45th St., Pittsburgh 1, Pa.
Sister M. Franciscana (43)
St. James Hospital, 1423 Chicago Rd., Chicago Heights, Ill.
Sister M. Georgia (48)
Box 171, Bacolod City, Occidental Negros, Philippine Islands.
Sister M. Gerald (Holtgrave) (49)
4950 W. Thomas St., Chicago 51, Ill.
Sister M. Godulina (46)
St. John's Hospital, Nineteenth & Utica Sts., Tulsa, Okla.
Sister M. Gonzales Duffy (49)
Pride & Locust Sts., Pittsburgh 19, Pa.
Sister M. Hortensis (47)
1431 N. Claremont Ave., Chicago 22, Ill.
Sister M. Jane Frances (47)
East Pikes Peak Ave., Colorado Springs, Colo.
Sister M. Jeanette (37)
152-11-89th Ave., Jamaica 2, N. Y.
Sister M. Juliana Weirick (45)
Wichita Hospital, Wichita, Kans.
Sister M. Justine (47)
St. Vincent Charity Hosp., E. 22nd St., Cleveland 15, Ohio.
Sister M. Leocadia (37)
St. Elizabeth's Hospital, 736 Cambridge St., Brighton, Mass.
Sister M. Leonica Wirkus (46)
1120 N. Leavitt St., Chicago 22, Ill.
Sister M. Ligouri (46)
Mercy Hospital, Cadillac, Mich.
Sister M. Loyola Huslig (46)
608 N. Fifth St., Garden City, Kans.
SISTER M. LUDMILLA (BAUER) (23)
St. Christopher's Convent, 3627 Vista Ave., St. Louis 10, Mo.
Sister M. Lutwina (44)
St. Mary's Hospital, Huntington, W. Va.
Sister M. Marcina (35)
430 E. Division St., Fond du Lac Wis.
Sister M. Marguerita (47)
13th & 9th Ave., Lethbridge, Alberta, Canada.
Sister M. Mariel German (47)
St. John's Hospital, 7911 Detroit Ave., Cleveland 2, Ohio.
Sister M. Medicia Bride (49)
1545 S. Layton Blvd., Milwaukee 4, Wis.
Sister M. Nathy McGetrick (43)
St. Joseph's Infirmary, Houston, Tex.
Sister M. Nicodema (43)
St. Anthony's Hospital, 8915 Woodhaven Blvd., Woodhaven 21, L. I., N. Y.
Sister M. Pelagia Rechtorik (46)
801 Benton Ave., Monett, Mo.
Sister M. Regina Joseph (47)
St. Agnes Hosp., 1900 S. Broad St., Philadelphia 45, Pa.
Sister M. Renee (45)
Holy Family Hospital, Murree Rd., Rawalpindi, Pakistan, India.
Sister M. Rosalia (45)
St. Mary's Hospital, 2200 Hayes St., San Francisco 17, Calif.
Sister M. Rose Columba (41)
St. Catherine's Hospital, 133 Bushwick Ave., Brooklyn 6, N. Y.
Sister M. Scholastica (43)
1019 Madison, Seattle, Wash.
Sister M. St. Henry (40)
St. Joseph's Hospital, Baltimore 13, Md.
Sister M. Stephanina (38)
St. Anthony Hospital, Terre Haute, Ind.
Sister M. Teresa (40)
601 N. W. 9th St., Oklahoma City 3, Okla.
Sister M. Therese Leja (41)
2601 Eighth Ave., Altoona, Pa.
Sister M. Verita (40)
1020 Market, LaCrosse, Wis.
Sister M. Wunibalda (42)
St. Mary's Hospital, Wausau, Wis.
Sister Magdalen (32)
Sisters' Hospital, Waterville, Me.
Sister Margaret Ann Schwering (36)
735 Eastern Pkwy., Louisville 8, Ky.
Sister Margaret Mary McCarthy (34)
St. Mary's Hospital, Saginaw, Mich.
Sister Margaret Mooney (32)
St. Agnes Hospital, Wilkens Ave., Baltimore, Md.
Sister Marguerite Le Fevre (43)
Providence Hospital, Mobile, Ala.
Sister Maria Joseph (46)
327-B 19th St., Far Rockaway, New York, N. Y.
Sister Maria Lucia (46)
1450 Chapel St., New Haven 11, Conn.
Sister Marian (41)
St. Elizabeth Hospital, 204 S. Broad St., Elizabeth 2, N. J.
Sister Marie Agathe (46)
Maryview Hosp., Western Branch Blvd., Portsmouth, Va.
Sister Marie Bernadette Gobeille (45)
Mercy Hospital, 233 Carew St., Springfield 4, Mass.
Sister Marie du Christ-Roi (47)
St. Vallier St., Chicoutimi, Quebec, Canada.
Sister Marie G. Fox (37)
St. Thomas Hospital, Nashville, Tenn.
Sister Marie Patrick (45)
153 W. 11th St., New York 11, N. Y.
Sister Mariette Seidl (42)
St. Joseph's Hospital, Chippewa Falls, Wis.
Sister Maris Stella Logeman (44)
St. Mary's Hospital, 2800 Main St., Kansas City 8, Mo.
Sister Marita Briden (43)
St. Mary's Hospital, Jefferson City, Mo.
Sister Mary Adamar (45)
Marietta & College Aves., Lancaster, Pa.
Sister Mary Adelaide (34)
St. Elizabeth Hospital, Youngstown, Ohio.
Sister Mary Adele (40)
218 Stone St., Watertown, N. Y.

Sister Mary Agnese (39)
St. Joseph's Hospital, 5000 W. Chambers St., Milwaukee 10, Wis.
Sister Mary Agnita (49)
Mercy Hospital, 718 N. Macomb St., Monroe, Mich.
Sister Mary Albertine Sage (48)
2301 Bellevue Ave., Los Angeles 26, Calif.
Sister Mary Alexius Lennon (49)
307 S. Euclid Ave., St. Louis 10, Mo.
Sister Mary Ambrosia (45)
127 S. Broadway, Yonkers 2, N. Y.
Sister Mary Andrew (45)
Rosary Hill Home, Hawthorne, N. Y.
Sister Mary Angeline (44)
St. Mary's Hospital, 1298 St. Mark's Ave., Brooklyn 13, N. Y.
Sister Mary Ann Welsch (43)
1325 S. Grand, St. Louis 4, Mo.
Sister Mary Aquina Speer (49)
601 E. Micheltoreno, Santa Barbara, Calif.
Sister Mary Augusta Dieden (49)
St. Margaret Hospital, 25 Douglas Hammond, Ind.
Sister Mary Avila (47)
St. Michael's Hosp., 30 Bond St., Toronto, Ont., Canada.
Sister Mary Beatrice (48)
1526 Grand Ave., Racine, Wis.
Sister Mary Beatrice (49)
Fitzgerald-Mercy Hospital, Darby, Pa.
SISTER MARY BERENICE RIPPERGER (25)
St. Mary's Hospital, Clayton Rd. & Bellevue Ave., St. Louis, Mo.
Sister Mary Bernardine (45)
153 W. 11th St., New York 11, N. Y.
Sister Mary Bernadine (43)
515-6th St., Niagara Falls, N. Y.
Sister Mary Borromeo Brose (47)
600 Oak, Anaconda, Mont.
Sister Mary Camilla Bertulli (45)
863 Central St., Framingham Centre, Mass.
Sister Mary Capistran (45)
Fiji Leprosy Hospital, Makogai, Fiji Islands, Oceania.
Sister Mary Carl Marty (47)
St. Dominic Hospital, 121 N. President St., Jackson, Miss.
Sister Mary Carmel Clarke (37)
Mercy Hospital, Baltimore, Md.
Sister Mary Carmelia Lohaus (44)
St. Joseph Hospital, 10th & Casterar Sts., Omaha, Neb.
Sister Mary Catherine (38)
Mercy Hospital, Iowa City, Iowa.
Sister Mary Cecilia Schruefer (37)
St. Mary's Ringling Hospital, Baraboo, Wis.
Sister Mary Cherubim Cukla (48)
St. Elizabeth's Hospital, Danville, Ill.
Sister Mary Clarissa (48)
St. Bernardine's Hospital, San Bernardino, Calif.
Sister Mary Columba (47)
St. Vincent's Retreat, North St., Harrison, N. Y.
Sister Mary Concepta Maher (43)
Santa Rosa Hospital, 745 W. Houston, San Antonio, Tex.
Sister Mary Cosmas (45)
Loretto Motherhouse, Nerinx, Ky.
Sister Mary Damian Young (48)
Little Company of Mary, San Pierre, Ind.
Sister Mary de Chantal Reilly (46)
1020 Franklin St., Mercy Hospital, Johnstown, Pa.
Sister Mary De Sales Joyce (39)
St. Michael's Hospital, Texarkana, Ark.
Sister Mary Donatus Krist (45)
415 W. 51st St., New York 19, N. Y.
Sister Mary Edith (45)
St. Mary's Hospital, Humboldt, Tenn.
Sister Mary Edward (43)
St. Vincent Hospital, 73 Vernon, Worcester, Mass.
Sister Mary Elisea Lawrence (47)
Our Lady of Angels' Convent, Glen Riddle, Pa.
Sister Mary Ellen Sherlock (47)
1504 Springhill Ave., Mobile 17, Ala.
Sister Mary Emmanuel (44)
Fairview & Salem, Dayton, Ohio.
Sister Mary Etheldreda (40)
St. Mary's Hospital, 1298 St. Marks Ave., Brooklyn, N. Y.
Sister Mary Eucheria (45)
Sacred Heart Hospital, 177 Amherst St., Manchester, N. H.
Sister Mary Eugenia Moore (46)
St. Vincents Hosp., 335 Bard Ave., West New Brighton, S.I., N. Y.
Sister Mary Eugenia Wood (48)
St. Peter's Hospital, New Scotland Ave., Albany 3, N. Y.
Sister Mary Fidelia (43)
St. Francis Hospital, Holdenville, Okla.
Sister Mary Florentine (Pearson) (42)
Mt. Carmel Hospital, Columbus, Ohio.
Sister Mary Francis Xavier (32)
Mount Mary College, Milwaukee 13, Wis.
Sister Mary Gentilla Olender (45)
8050 Holme Ave., Nazareth Hospital, Philadelphia 15, Pa.
Sister Mary Georgiana Schara (42)
Mt. St. Rose Sanatorium, 9101 S. Broadway, St. Louis 23, Mo.
Sister Mary Germaine Hanley (48)
St. Francis Hosp., 114 Woodland St., Hartford 5, Conn.
Sister Mary Getulia Honorowski (35)
Mother Frances Hospital, 825 E. Houston St., Tyler, Tex.
Sister Mary Grace Kujawa (43)
St. John's Hospital, Fourth & Iowa Sts., Huron, S. Dak.
Sister Mary Hiltrudis Chlebik (38)
1015 O'Connor Ave., LaSalle, Ill.
Sister Mary Imelda (49)
Bon Secours Convent, 241 Jackson St., Lawrence, Mass.
Sister Mary Immaculata (47)
Fanny Allen Hosp., Winooski Park, Winooski, Vt.
Sister Mary Irene Broussard (47)
1321 Annunciation, New Orleans 13, La.
Sister Mary Ireneus Mathews (45)
St. Joseph's Hospital, Reading, Pa.
Sister Mary Jean Doerr (46)
Corwin Hospital, Pueblo, Colo.
Sister Mary John Geiermann (42)
2221 Madison Ave., Toledo, Ohio.
Sister Mary Josita Specht (45)
St. Edward Hospital, 703 Spring St., New Albany, Ind.
Sister Mary Junilla (46)
2301 Bellevue Ave., Los Angeles, Calif.
Sister Mary Kateri (49)
St. Joseph Mercy Hospital, Aurora, Ill.
Sister Mary Kevin Coughlin, (47)
Notre Dame Convent, 1325 Ansel Rd., Cleveland, Ohio.
Sister Mary Laurissa Felix (37)
St. Elizabeth Hospital, 1506 S. Oneida St., Appleton, Wis.
Sister Mary Leonore (39)
Fitzgerald Mercy Hospital, Lansdowne Ave. & Bailey Rd., Darby, Pa.
Sister Mary Louise Landry (45)
Mercy Hospital, 144 State St., Portland 3, Me.
Sister Mary Loyola Keenan (39)
St. John's Hospital, 2203 Connor Ave., Joplin, Mo.
Sister Mary Lucille (48)
St. Patricks Hospital, Lake Charles, La.
Sister Mary Mark (38)
Farren Memorial Hospital, Montague City, Mass.
Sister Mary M. Swift (48)
1905 E. Third Ave., Durango, Colo.
Sister Mary Mercy Dalton (49)
307 S. Euclid Ave., St. Louis 10, Mo.
Sister Mary Nicoline Streveler (45)
St. Michael Hospital, 1845 N. 4th St., Milwaukee 12, Wis.
Sister Mary Nomina Kordasz (47)
Mt. Alvernia, Reading, Pa.
Sister Mary Octavia (38)
St. Mary's Infirmary, 1536 Papin, St. Louis 3, Mo.
Sister Mary Oliver Kelly (44)
Mercy Hospital, Davenport, Iowa.
Sister Mary Oswalda Flaherty (35)
2010 Adams Ave., Scranton, Pa.
Sister Mary Patricia Schmidley (43)
720 S. Brooks St., Madison, Wis.
Sister Mary Paul Johnston (47)
Providence Hospital, Columbia 62, S. C.
Sister Mary Quentin McShane (45)
Pharmacy St. Mary's Hospital, Rochester, Minn.
Sister Mary Raphael Hilger (45)
624 Jones St., Sioux City, Iowa.
Sister Mary Richarda Weichlein (47)
St. Francis Hospital, Peoria, Ill.
Sister Mary Rita (43)
Mount Alverno Convent, Warwick, N. Y.
Sister Mary Rita Davis (43)
St. Thomas Hospital, Akron 10 Ohio.
Sister Mary Rita Spellman (37)
Mercy Hospital, Baltimore, Md.
Sister Mary Stephanina (Hvizdos) (38)
St. James' Hospital, Chicago Heights, Ill.
Sister Mary Rosalia (49)
415 Quincy, Pueblo, Colo.
Sister Mary Sabina (38)
St. Mary's Hospital, Emporia, Kans.
Sister Mary Salome Nolte (46)
Braddock General Hospital, Braddock, Pa.
Sister Mary Stanisia (48)
Immaculate Conception Convent, S. Main St., Lodi, N. J.
Sister Mary Tarcisia Bucki (47)
2650 N. Ridgeway Ave., Chicago 47, Ill.
Sister Mary Tekawatha Jump (38)
Sacred Heart Hospital, Spokane 9, Wash.
Sister Mary Vera Rouke (44)
Mercy Hospital, 565 Abbott Rd., Buffalo 20, N. Y.
Sister Mary Victorine (44)
St. Luke's Hospital, 379 East St., Pittsfield, Mass.
Sister Mary Wilhelmina (19)
c/o St. Mary of Nazareth Hospital, 1120 N. Leavitt St., Chicago, Ill.
Sister Mary Wilhelmina (42)
1601 Second Ave., No., Great Falls, Mont.
Sister Marysia Kubsda (48)
St. John's Hosp., Springfield, Ill.
Sister Miriam Eugene (45)
2501 Jackson Ave., Long Island City, N. Y.
Sister Miriam Franik (48)
Buena Vista & Park Hill Aves., San Francisco, Calif.
Sister Miriam Hall (43)
801 W. High St., Lima, Ohio.
Sister Odile (45)
Providence Hospital, 17th & E. Jefferson, Seattle 22, Wash.
Sister Paulin du Sacre Coeur (49)
4000 Boulevard Lasalle, Verdun, Quebec, Canada.
Sister Pius Augustine Macdonald (45)
Sacred Heart Hospital, 101 8th Ave., Spokane 9, Wash.
Sister Priscilla Kearney (43)
St. Mary's Hospital, 4th St. & Willow Ave., Hoboken, N. J.
Sister Regina Marie Pingel (48)
6420 Clayton Rd., St. Louis 17, Mo.
Sister Remi (44)
St. Ignatius Hospital, 1009 S. Mill, Colfax, Wash.
Sister Rose Dominici (49)
133 Bushwick Ave., Brooklyn 6, N. Y.
Sister Rose Lethiecq (45)
St. Peter's General Hospital, New Brunswick, N. J.
Sister Rose of Providence, Ginder (42)
St. Patrick's Hospital, Missoula, Mont.
Sister Rosella Knepler (49)
8th & Mason, Springfield, Ill.
Sister St. Jean de la Croix (49)
143 Rue Wolfe, Levis, P. Q., Canada.
Sister Scholastica Rodgers (38)
Providence Hospital, 2500 W. Grand Blvd., Detroit 8, Mich.
Sister Stanislaus (39)
2447 N. W. Westover Rd., Portland, Oreg.
Sister Theresa Dietrich (46)
St. John Hospital, Springfield, Ill.
Sister Ven. Evarista Higgins (41)
2875 W. 19th St., Chicago 23, Ill.

Sister Veronica Joseph Golden (47)
St. Francis Hospital, Hamilton & Chambers, Trenton, N. J.
Sister Vincent Kurtzeman (46)
2701 9th Court, S., Birmington 5, Ala.
Sister Walter Damien (47)
2260 Liliha St., Honolulu 3, Hawaii.
Sister Zoe Shaughnessy (32)
Our Lady of Lourdes Memorial Hospital Inc., 169 Riverside Dr., Binghamton, N. Y.
Sisson, Harriet E. (47)
541 N. 18th St., Corvallis, Ore.
Sisto, John L. (49)
2031 Bedford Ave., Brooklyn 26, N. Y.
Sittler, Franklin (48)
Deshler, Nebr.
Sivcovich, Paul F. (47)
7267 Zephyr Pl., Maplewood 17, Mo.
Sivigny, John A. (49)
Box 507, Bridgehampton, N. Y.
Sivy, John F. (46)
15468 Cloverlawn Ave., Detroit 21, Mich.
Siwan, Eleanor M. (45)
Siwan Pharmacy, 18701 W. Warren, Detroit 28, Mich.
Skalet, Alice (47)
Aberdeen, Idaho.
Skaron, Louis M. (48)
1541 Attridge Ave., Los Angeles 33, Calif.
Skauen, Donald (45)
The University of Connecticut, Coll. of Pharm., 150 York St., New Haven, Conn.
Skeath, Alex H. B. (46)
2732 Limekiln Pike, North Hills, Pa.
Skenderian, George (49)
119 Hampshire, Cambridge 39, Mass.
Skinner, Emmett H. (49)
919 N. Taylor Ave., St. Louis 8, Mo.
Skinner, Kenneth L. (46)
137 N. Commercial, Trinidad, Colo.
Sklar, S. Vincent (48)
Liggett Drug Store, 499 Central Ave., St. Petersburg, Fla.
Skoglund, Herbert (39)
4838 Haddon Ave., Chicago, Ill.
Skolaut, Milton W. (44)
Pharmacy Dept., U. S. Marine Hospital, Staten Island 4, N. Y.
Skrivanek, Frank J. (49)
203 E. Jackson, El Campo, Tex.
Skroko, Helen Z. (49)
1020 Kelly Ave., Joliet, Ill.
Skuban, George L. (46)
403 Potter Ave., Ann Arbor, Mich.
Slabodnick, William (46)
Massillon City Hospital, Amherst Rd., Massillon, Ohio.
Sladky, Louis F. (49)
9300 S. Oakley Ave., Chicago 20, Ill.
Slama, Frank James (29)
1609 Chilton St., Baltimore 18, Md.
Slanker, Richard C. (47)
1315 E. Norwood Pl., Alhambra, Calif.
Slater, Charles H. (42)
R. D. 2, Phillipsburg, N. J.
Slater, John D., Sr. (45)
145 N. Gallatin St., Jackson, Miss.
Slater, Stuart (48)
176 Ross St., Brooklyn 11, N. Y.
Slatkoff, Samuel P. (37)
175 Hall Ave., Perth Amboy, N. J.
Slaughter, Genevieve D. (47)
Atlantic City Hosp., Atlantic City, N. J.
Slavin, Morton (47)
300 First Ave., New York 9, N. Y.
Slaybaugh, Elmer H. (42)
Box 435, Parsons, Kans.
Slayton, Lillian Marie (45)
43 W. Main St., Myerstown, Pa.
Sless, Ephraim G. (44)
9 N. Iroquois Ave., Margate City, N. J.
Slesser, Abraham E. (46)
104 W. Chestnut St., Louisville 2, Ky.
Slick, David P. (47)
627 Railroad St., Forest City, Pa.
Sligar, Warren D. (46)
516 E. 8th, San Angelo, Tex.
Sloane, Aaron B. (49)
206 Glencoe Rd., Upper Darby, Pa.
Sloane, Philip (46)
329 Mamaroneck Ave., Mamaroneck, N. Y.
Sloban, Samuel (49)
3644 East 154th St., Cleveland 20 Ohio.
Slobodkin, Abraham (49)
463 Park Dr., Boston 15, Mass.
Slocumb, J. B. (40)
Route 1, Moose Lake, Minn.
Slone, Earl P. (25)
Univ. of Kentucky, Coll. of Pharmacy, 104 W. Chestnut St., Louisville 2, Ky.
Slonecki, Edward J. (43)
39 Falcon St., East Meadows, Hicksville L. I., N. Y.
SLOSS, ROBERT AUDLEY (01)
917 Park Ave., Albany 3, N. Y.
Slott, Meyer (48)
512 S. 59th St., Philadelphia 43, Pa.
Slowick, Edmund F. (45)
38 Montvale Ave., Stoneham 80, Mass.
Slowik, Alexander (46)
7501 W. Warren Ave., Detroit 10, Mich.
Smaldone, Jeanne R. (46)
132 Chess St., Monongahela, Pa.
Small, Mr. La Verne D. (49)
1655 Nemaha, Lincoln 2, Nebr.
Small, Walter A. (47)
924 Pike St., St. Charles, Mo.
Smart, Helen E. (46)
1959 Nolan St., San Bernardino, Calif.
Smeck, Carroll I. (49)
3928 N. E. Knott St., Portland, Oreg.
Smedresman, Max (41)
39 Marcy Pl., Bronx 52, N. Y.
Smith, A. Herbert (48)
4439 Albermarle St., N. W., Washington, D. C.
Smith, Albert C. (39)
College of Pharmacy, Ohio Northern Univ., Ada, Ohio.
Smith, Austin (46)
535 N. Dearborn St., Chicago 10, Ill.
Smith, Ben W. (46)
432 N. Walnut St., Janesville, Wis.
Smith, C. John (42)
31-63rd St., West New York, N. J.
Smith, Carroll Dunhan (28)
401 Codwise Ave., New Brunswick, N. J.
Smith, Charles H. (47)
5101 Baltimore Ave., Philadelphia 43, Pa.
Smith, Clarence B. (49)
Prescription Shop, Gallup, N. Mex.
Smith, Claude Norman (42)
1012 12th St., N. W., Washington, D. C.
Smith, Clayton Sidney (39)
College of Medicine, Ohio State Univ., Columbus 10, Ohio.
Smith, Clive S. (45)
Baker Rd., Raynham, Mass.
Smith, Dallas M. (47)
4114 St. Elmo Ave., Chattanooga, Tenn.
Smith, Daniel Briggs (43)
c/o Service Drug Co., Meridian, Miss.
Smith, Daniel F., Jr. (48)
2525 Lysle Lane, Norwood 12, Ohio.
SMITH, DANIEL H. (25)
College of Pharmacy, Howard Univ., Washington, D. C.
Smith, Donald W. (46)
3803 Four Mile Dr., So., Arlington, Va.
Smith, Eula Linda (32)
c/o Flower Hospital, Toledo, Ohio.
Smith, Frank Hoover (46)
122 E. Market St., Blairsville, Pa.
Smith, Frank M. (47)
1217 Kenmore Blvd., Akron 14, Ohio.
Smith, Fred C. (47)
Box 47, Concord Depot, Va.
Smith, Fulwood A. (46)
Box 370, Graycourt, S. C.
Smith, Gerald J. (47)
10319 St. Henry Lane 14, St. Louis 3, Mo.
Smith, Gordon R. (46)
100 Arkell St., Hamilton, Ont., Canada.
Smith, H. H. (43)
809 N. Taylor St., Amarillo, Tex.
Smith, Hammie J. (47)
Estill, S. C.
Smith, Harold (48)
221 Victoria St., Toronto 1, Ontario, Canada.
Smith, Harry A. (49)
Merrimac, Ky.
Smith, Howard H. (49)
17 Barclay, Greensburg, Pa.
Smith, Ione C. (41)
27 Woodland, S. E., Massillon, Ohio.
Smith, J. E. (39)
The Royal Jubilee Hospital, Victoria, B. C., Canada.
Smith, J. Warren (41)
3146 E. Burnside, Portland 15, Oreg.
Smith, John H. (48)
711 Coolidge St., Plainfield, N. J.
Smith, Joseph Leslie (47)
5602 Church Ave., Brooklyn 3, N. Y.
Smith, L. Russell (44)
361 Ohio St., Sharon, Pa.
Smith, Lawrence J. (47)
415 S. Market, Wichita 2, Kans.
Smith, Leontine B. (49)
165 Dorwin Ave., Syracuse 5, N. Y.
Smith, Lewis (39)
Baylor Univ. Hospital, 3315 Junius St., Dallas, Tex.
SMITH, LINVILLE HOLTON (92)
701 Center St., Jamaica Plains, Mass.
Smith, Louis C., Jr. (47)
2318 Farrand Dr., Richmond 23, Va.
Smith, L. T. (47)
115 N. Court St., Opelousas, La.
Smith, Mae Ola (49)
2353 N. Adams, Indianapolis 18, Ind.
Smith, Margaret (45)
1149-28th St., Newport News, Va.
Smith, Marshall C. (46)
105 McLeod St., Hattiesburg, Miss.
Smith, Nathan (47)
41-15 76th St., Jackson Heights, Long Island, N. Y.
Smith, O. B. (47)
627 S. Weller, Springfield, Mo.
Smith, Paul A. (47)
1211 Ewing, Fort Wayne, Ind.
Smith, Paul J. (49)
Sharp & Dohme, Inc., 640 N. Broad St., Philadelphia 1, Pa.
SMITH, PAUL S. (45)
7 Central Ave., Rochester, N. H.
Smith, Pierre F. (46)
Rutgers Univ., College of Pharmacy, 1 Lincoln Ave., Newark 4, N. J.
Smith, R. Blackwell, Jr. (45)
Medical College of Virginia, Richmond 19, Va.
Smith, R. G. (49)
Sutersville, Pa.
Smith, Randolph N. (37)
Burkesville, Ky.
Smith, Reginald W. (49)
233 Cedarhurst St., Pittsburgh 10, Pa.
Smith, Robert C. (49)
720 W. 1st St., Uhrichsville, Ohio.
Smith, Robert W. (47)
Box 1655, Riverside Sta., Miami 35, Fla.
Smith, S. C. (49)
126 S. Simter Ave., Arcadia, Fla.
Smith, Samuel S. (49)
412 Broadway, Fargo, N. Dak.
Smith, Sidney H. (47)
3028 E. 20th Terrace, Kansas City Mo.
Smith, Thomas J., Jr. (46)
539 Genter, La Jolla, Calif.
Smith, Thurlow C. (45)
1052 Oliver St., North Tonawanda, N. Y.
Smith, Vada Lee (42)
614 N. 20th St., Birmingham, Ala.
Smith, Verle C. (46)
526 S. Main St., Tulsa 3, Okla.
Smith, Vivien B. (49)
106 Third Ave., Newark 4, N. J.
Smith, W. B. (37)
Stuart Circle Hospital, Richmond, Va.
Smith, W. J. (41)
Drawer 151, Chapel Hill, N. C.

**Smith, Walter E. (47)**
929—47th St., W., Birmingham 8, Ala.
**Smith, Wheaton B. (45)**
870 Toronto Ave., Toledo 9, Ohio.
**Smith, Wilbur R. (47)**
1800 Knoxville, Peoria 5, Ill.
**Smith, Willard G. (39)**
3551 University Ave., Los Angeles 7, Calif.
**Smith, William Adelbert (43)**
1002 Rugby Rd., Charlottesville, Va.
**Smith, William O. (35)**
2921 S. 16th St., Arlington, Va.
**Smith, William P. (46)**
427 S. Fairview Ext., Spartanburg, S. C.
**Smith, Winfield S. (47)**
Main St., & Washington Ave., Carnegie, Pa.
**Smithline, Arthur (46)**
6104 Third Ave., Brooklyn 20, N. Y.
**Smithline, Ruth (41)**
6104 Third Ave., Brooklyn, N. Y.
**Smithwick, Arthur T. (47)**
Elm Rd., Cromwell, Conn.
**Smits, A. J. M. (40)**
Lago P. O. Box 684, Lago Oil & Transport Co., Ltd., Aruba, Ned. Antillen.
**Smouse, Eugene G. (41)**
804 Penn Ave., Wilkinsburg, Pa.
**Smouse, Richard E. (49)**
P. O. Box 210, Traer, Iowa.
**Smythe, Chas. E. (45)**
710-14th Ave., S. E., Minneapolis 14, Minn.
**Snashall, William R. (48)**
390 S. Harris Ave., Columbus 4, Ohio.
**Snecinski, Irene (43)**
Burbank Hosp., Fitchburg, Mass.
**Sneed, John L. (47)**
Apt. F-2, St. James Terrace Apts., 30th Street, Newport News, Va.
**Snell, George L. (48)**
7347 Terrace Dr., El Cerrito, Calif.
**Snider, Alfred W. (47)**
90 E. North Broadway, Columbus, Ohio.
**Snider, Norman V. (47)**
608 High St., Grinell, Iowa.
**Snoddy, Iris June (48)**
Emory Univ. Hospital, Emory Univ., Ga.
**Snow, Carmel M. (49)**
3828 Florence Dr., Alexandria, Va.
**Snow, Carlton (45)**
1841 S. Westnedge, Kalamazoo 39, Mich.
**Snow, James B. (46)**
Box 962, Cleveland, Miss.
**Snowberger, Fred T. (49)**
849 W. 13th, Eugene, Oreg.
**Snowden, J. W. (40)**
Rockville, Ind.
**Snyder, Anthony L. (39)**
Box 810, Winfield, Kans.
**Snyder, Dayle A. (28)**
900 S. Oak Park Ave., Oak Park, Ill.
**Snyder, F. O. (49)**
Orange Park, Fla.
**Snyder, Harry Curtis (47)**
629 E. 83rd St., Chicago 19, Ill.
**Snyder, John M. (46)**
1028 Shoreham Bldg., Washington 5, D. C.
**Snyder, J. Paul (16)**
1028 Shoreham Bldg., Washington 5, D. C.
**Snyder, Leo J. (47)**
515 Morales, San Antonio 7, Tex.
**Snyder, Melvus K. (43)**
2236 Lycaste, Detroit 14, Mich.
**Snyder, Robert S. (49)**
Westmorland Ave., Montvale, N. J.
**Snyder, Ronald R. (46)**
1408 W. Jefferson St., Kokomo, Ind.
**Snyder, Wilfred (48)**
Berthoud, Colo.
**Snyder, William R. (42)**
2114 Caplin Ave., Detroit, Mich.
**Soape, Lorene (44)**
520½ Elizabeth St., Corpus Christi, Tex.
**Sobek, Bernard (45)**
19436 Van Dyke, Detroit 12, Mich.
**Sobel, Elliott (48)**
6911 Apperson St., Tujunga, Calif.
**Sobeslavsky, Louis (47)**
3602 S. 24th St., Omaha 7, Nebr.
**Sobol, Edwin F. (47)**
7200 S. Racine Ave., Chicago 36, Ill.
**Soderdahl, Paul (37)**
525 N. Humphrey Ave., Oak Park, Ill.
**Sohocki, Walter B. (46)**
335 Hudson St., Toledo 8, Ohio.
**Soine, Taito O. (43)**
1211 Yale Ave., S. E., Minneapolis 14, Minn.
**Soladar, Augusta L. (46)**
1607 E. Baltimore, Baltimore 31, Md.
**Sole, D. W. (44)**
3065 Main St., Weirton, W. Va.
**Solensky, Rosemary Louise (47)**
Brisbin St., Houtzdale, Pa.
**Soles, Harry C., Jr. (46)**
Woodlawn Box 365, Jeannette, Pa.
**Solimando, Dominic A. (49)**
619-73rd St., Brooklyn 9, N. Y.
**Solimando, Grace P. (45)**
619-73rd St., Brooklyn 9, N. Y.
**Solis, Jorge (47)**
Calzada #551 esquina a D, Vedado, Havana, Cuba.
**Sollenberger, Norman (37)**
Temple Univ. Hosp., Broad & Ontario Sts., Philadelphia 40, Pa.
**Sollod, Joseph A. (44)**
2142 W. North Ave., Baltimore 17, Md.
**Solomon, Joseph D. (47)**
1121 N. State St., Chicago 10, Ill.
**Solomon, Julius O. (46)**
24624 Lakme Ave., Wilmington, Calif.
**Solomon, Morris (48)**
17 Watervliet Ave., Albany 5, N. Y.
**Solomon, Simon (25)**
1342 Pennsylvania Ave., Baltimore, Md.
**Solomons, I. A., Jr. (45)**
P. O. Box 687, Savannah, Ga.
**Solonen, Nicholas W. (47)**
2116 Birch St., Easton, Pa.
**Solovay, Jacob (47)**
3004 Bedford Ave., Brooklyn 10, N. Y.
**Solove, Richard J. (45)**
1169 Linwood Ave., Columbus, Ohio.
**Solum, Inger (44)**
73 Irwinwood Rd., Lancaster, N. Y.
**Somers, Robert (48)**
9116 Gibson St., Los Angeles 34, Calif.
**Sommers, Blanche (44)**
School of Phcy., Univ. of Oklahoma, Norman, Oklahoma.
**Sondern, Clarence W. (30)**
113 N. 13th St., Newark 7, N. J.
**SONNEDECKER, GLENN (41)**
School of Pharmacy, Univ. of Wis., Madison, Wis.
**Sonnelitter, Robert J. (48)**
112 S. Buffalo St., Orchard Park, N. Y.
**Sonnenberg, E. G. (39)**
167 Main St., Menasha, Wis.
**Sonnenberg, James J. (46)**
2715 Minot Ave., Cincinnati 9, Ohio.
**Sonntag, John (47)**
1446 Chase Ave., Cincinnati 23, Ohio.
**Sopocy, Steve (45)**
6656 S. Halsted St., Chicago 21, Ill.
**Sordill, Michael (46)**
110 Market St., Allwood, Clifton, N. J.
**Soren, Charles H. (44)**
511 E. 72nd St., c/o Purepac Corp., New York 21, N. Y.
**Sorenson, A. W. (49)**
1071 The Alameda, San Jose, Calif.
**Sorenson, Arthur N., Jr. (49)**
3330 S. E. 66th Ave., Portland 6, Oreg.
**Sorenson, Clarence (49)**
4401—18th Ave., So., Minneapolis 7, Minn.
**Sorg, Nathan F. (47)**
1144—7th Ave., Marion, Iowa
**Sorgen, Howard S. (49)**
91-17—115th St., Richmond Hill 18, N. Y.
**Soria, Carlos Baco (45)**
Box 532, Mayaguez, P. R.
**SORKENN, RALPH (29)**
35 Hillside Ave., New York, N. Y.
**Soschin, Leonard (46)**
25 Poe Ave., Newark 6, N. J.
**Soto, Bertha (49)**
Calle 6 #516, altos entre 21 y 23, Havana, Cuba.
**Soto, R. Monserrate (45)**
Box N, Cayey, P. R.
**Soto-Ibarra, Moises (49)**
Apartado Correos 2318, Caracas, Venezula.
**Soule, H. E. (49)**
Rte. 6, Box 636, Bakersfield, Calif.
**Soyars, William H. (49)**
4130 Gallatin Rd., Nashville 6, Tenn.
**Soybel, Abraham (46)**
218 Fairview Ave., Hamden, Conn.
**Spaar, Clinton (48)**
898 Main Ave., Passaic, N. J.
**Spaccarelli, Deno A. (49)**
2508 Auburn Ave., Cincinnati 19, Ohio.
**Spaccarelli, John A. (49)**
3500 Erie Ave., Cincinnati 8, Ohio.
**Spaet, Irving (39)**
140 E. 54th St., New York, N. Y.
**Spagna, Ferdinand A. (21)**
2157 Orchard St., Chicago, Ill.
**Spagnoletti, Giovanni (48)**
76 Magnolia St., Belleville 7, N. J.
**Spak, Louis E. (43)**
52 Ambrose St., New Brunswick N. J.
**Spalding, Dexter B. (46)**
Box 1265, Joliet, Ill.
**Spalding, Ross J. (47)**
744 Bowen Ave., Chicago, Ill.
**Spangler, Harry A. (41)**
6102 Germantown Ave., Philadelphia, Pa.
**Spangler, Henry R. (49)**
511 W. 6th St., North Platte, Nebr.
**Spangler, Kenneth G. (39)**
1728 N. Montford Ave., Baltimore 13, Md.
**Spangler, Luther E. (45)**
200 S. Duke St., York, Pa.
**Spano, Arthur N. (46)**
108 Polk St., Cumberland, Md.
**Sparaco, Anthony J. (49)**
295 Bloomfield Ave., Caldwell, N. J.
**Spargo, Florence F. (49)**
4 Laurel St., West Haven 16, Conn.
**Spatafora, Julius E. (46)**
801 Desiard St., Monroe, La.
**Spaulding, Adriel H. (43)**
P. O. Box 353, St. Petersburg 1, Fla.
**Spaulding, Henry A. (44)**
Derry, N. H.
**Spaulding, Howard A. (47)**
400—11th St., Oakmont, Pa.
**Spaulding, Ralph F. (45)**
P. O. Box 628, Woodstock, N. Y.
**Speaker, Oscar P. (49)**
22 E. Michigan Ave., Battle Creek Mich.
**Spear, Alice O. (48)**
4284 Kraft Ave., North Hollywood, Calif.
**Spear, Carl L. (46)**
139 S. Main St., Puente, Calif.
**Spear, Edwin W. (46)**
Newton-Wellsley Hospital, 2014 Washington St., Newton Lower Falls, Mass.
**Spearbraker, Henry W. (46)**
315 S. Pearl, New London, Wis.
**Spears, Ralph T. (46)**
907 Broadway, Bowling Green Ky.
**SPEASE, EDWARD (12)**
Wall St., M. R. 1, Revenna, Ohio.
**Speckart, Paul L. (45)**
4100 W. Natural Bridge, St. Louis 15, Mo.
**Spector, Joseph (46)**
72 Belmont Ave., Newark 3, N. J.
**Spector, Sheldon M. (49)**
1051 Michigan Ave., Miami Beach 39, Fla.
**Speidel, Harry W., Jr. (47)**
315 E. Lake Ave., Ladysmith, Wis.
**Speier, Eva (43)**
1545 B St., Lincoln 2, Nebr.

Spence, William R. (46)
911 Sunset Ave., Rocky Mount, N. C.
Spera, John T. (46)
2437 S. 20th St., Philadelphia 45, Pa.
Sperandio, Glen J. (45)
Bldg. 5, Apt. 4, Ross-Ade Dr., West Lafayette, Ind.
Sperling, Louis (48)
4741-8th, Philadelphia 20, Pa.
Sperzel, Jean A. (49)
1861 Alfresco Pl., Louisville 5, Ky.
Spevack, Samuel W. (47)
1302 W. Front St., Plainfield, N. J.
Speyer, Alfred C. (46)
3138 Elysian Fields, New Orleans, La.
Spiegel, Robert, (45)
216½ Cecil Ave., Knoxville, 17 Tenn.
Spieldoch, Gilbert (43)
University Drug Co., 609 N. Grand St., St. Louis, Mo.
Spieldoch, T. M. (47)
6223 Eichelberger, St. Louis 9, Mo.
Spika, Edwin A. (44)
Prineville Drug, Prineville, Oreg.
Spindel, Abraham (46)
394 Monroe St., Passaic, N. J.
Spinner, Paul P. (46)
Lansing, Iowa.
Spittel, Robert J. (41)
Frederick and Newburg, Catonsville, Md.
Spitzer, Charles E. (46)
R. F. D. 1, Grafton, Ohio.
Spitzer, Nathan (45)
85 Greenwich Ave., New York 14, N. Y.
Spivack, Leon H. (46)
6216 Webster St., Philadelphia, Pa.
Spivak, Anatol (46)
481 Wales Ave., New York 55, N. Y.
Sporakowski, George (47)
7201 W. National, Milwaukee 14, Wis.
Sprague, Anthony A. (43)
356 Jackson St., Orange, N. J.
Sprague, Charles H. (49)
Creighton Univ. Coll. of Pharm., Omaha 2, Nebr.
Sprague, William H. (49)
6103 Military Ave., Omaha 4, Nebr.
Spranza, John J. (46)
1057 S. Mayfield Ave., Chicago 44, Ill.
Sprecher, Waldo C. (45)
2644 N. 40th St., Milwaukee 10, Wis.
Spriggs, George W. (47)
17669 Stabelin, Detroit 19, Mich.
Sprinkle, Mildred (49)
5266 Raber St., Los Angeles 42, Calif.
Sproat, Malcolm P. (44)
91 N. Paint St., Chillicothe, Ohio.
Sprowls, Joseph B. (42)
Temple Univ. Coll. of Phcy; Broad St. & Montgomery Ave., Philadelphia 40, Pa.
Spruth, Henry C. (48)
141 Witchwood Lane, Lake Bluff, Ill.
Srivastava, Gorakh P. (47)
Dept. of Pharmaceutics, Benares Hindu Univ., Benares, U. P., India.
Sroka, Amelia E. (47)
18663 Syracuse, Detroit 34, Mich.
Stackhouse, Bernard J. (49)
c/o Cosper Apts., A-2, Grand Rapids, Mich.
Stackpole, Louise E. (44)
87 Cony St., Augusta, Me.
Stacy, Perry M. (40)
Jones Pharmacy, Lancaster, Mo.
Stadnik, John (49)
45 Curtiss Parkway, Miami Springs, Fla.
Staeben, Fred B. (49)
c/o Lee's Drug Store, Menomonie, Wis.
Stafford, Fred (48)
584 Delta Ave., Cincinnati 26, Ohio.
Stafford, Marjorie (33)
Univ. of Oklahoma Library, Norman, Okla.

Stagg, Paule G. (48)
Mamou, La.
Stagg, Samuel J. (43)
Basile, La.
Staggs, Betty M. (47)
113 Peerless St., Chattanooga, Tenn.
Staggs, Jack E. (49)
3170 Riddle Rd., San Jose, Calif.
Staggs, William B. (47)
113 Peerless St., Chattanooga, Tenn.
Stagner, Vernon G. (46)
310 Van Buren St., Washington, Iowa.
Stahl, Charles W. (47)
1566 St. Nicholas Ave., New York 33, N. Y.
Stahl, Kenneth H. (46)
School of Pharmacy, Univ. of Maryland, 32 S. Greene St., Baltimore 1, Md.
Stahl, Samuel S. (46)
420-63rd St., Miami Beach, Fla.
Stahlhut, Mark H. (49)
1301 Main, Crete, Nebr.
Stalker, Robert LeBaron (45)
242 S. 3rd St., Philadelphia 6, Pa.
Stall, Leo W. (45)
433 Grant St., Buffalo 13, N. Y.
Staloff, Edward (38)
470 West End Ave., New York, N. Y.
Stam, Mrs. Donald F. (48)
Chestertown, Md.
Stanforth, William J. (46)
1613 Woodlawn Ave., Indianapolis, Ind.
Stangier, Herman J. (46)
2301 Federal Blvd., Denver 11, Colo.
Stangle, Leo (32)
7714 Kingston Ave., Chicago 49, Ill.
Stanish, Edward S. (47)
1547 S. St. Johns Ave., Highland Park, Ill.
Stanislawski, Casimir John (47)
7123 Parkwood, Detroit 10, Mich.
Stanislawski, Lillian R. (46)
12220 Sorrento, Detroit 27, Mich.
Stanko, George L. (49)
701 Connecticut St., Gary, Ind.
Stanley, Emerson D. (32)
402 S. Park St., Madison 5, Wis.
Stanlonis, Walter A. (49)
5301 Manistique, Detroit 24, Mich.
Stapel, Forrest H. (48)
Veterans Hospital, Minneapolis, Minn.
Stapinski, Narcey A. (49)
22 E. Main St., Glen Lyon, Pa.
Staple, George R. (48)
5845 MacArthur, Oakland, Calif.
Staples, Mr. Vivian (47)
1500 3rd Ave., S., Minneapolis, Minn.
Stapleton, Gail (46)
Omak, Wash.
Stapp, William F. (41)
Marquette Univ. School of Medicine, 561 N. 15th St., Milwaukee 3, Wis.
Starburg, Harry L. (42)
1429 S. Stanley Ave., Los Angeles, Calif.
Starcher, Charles G. (48)
Crane's Drug Store, Fairmount, W. Va.
Stark, Adam J. (49)
731 Chester, Birmingham, Mich.
Stark, Ralph H. (47)
1225 A N. 44th St., Milwaukee 8, Wis.
Starkey, William P. (43)
American Bldg., Cincinnati, Ohio.
Starkman, Manning Arthur (28)
463 Bloor St., W., Toronto, Ont., Canada.
Starling, Bryce E. Jr., (48)
203 College St., Leesburg, Fla.
Starner, William B. (49)
Box 366, Portland, Pa.
Starr, Mabel Charlotte (45)
33 Inwood Pl., Buffalo 9, N. Y.
Starr, Muriel (39)
3844 Bloomington Ave., Minneapolis, Minn.
Starshak, A. L. (42)
744 E. Bowen, Chicago, Ill.
Stasny, Joseph T. (47)
1305 Argonne Dr., West Natrona, Pa.

STASZAK, WALTER ANTHONY (24)
680 S. Genesee St., Waukegan, Ill.
Statia, Perrin C. (47)
28 Herlan Ave., Kitchener, Ont., Canada.
Statler, Robert A. (47)
52 Harwood St. Pittsburgh 11, Pa.
Stauber, Robert A. (33)
53 Main St., Cortland, N. Y.
Stauffer, Edward E. (49)
1013 S. 5th St., Alhambra, Calif.
Stauffer, Louis E. (25)
Main & Broadway, Union Bridge, Md.
Stauffer, Zennie (45)
Oregon State Tuberculosis Hospital, Salem, Oreg.
Staulz, Stanley A., Jr. (48)
4477 Hilltop Dr., San Diego 2, Calif.
Stava, Edward J. (38)
915 25th St., S. E., Cedar Rapids, Iowa.
Staven, James Oliver (43)
1221 Masonic Ave., San Francisco 17, Calif.
Stazinski, Stanely A. (42)
c/o Lynch's Pharmacy, Box 310, East Douglas, Mass.
Stearn, Boris J. (48)
3201 Irving Pk., Chicago 18, Ill.
Stearn, Samuel (47)
2525 W. North Ave., Chicago 47, Ill.
Stebbins, Gerald P. (47)
Barron, Wis.
Stec, A. John (47)
723 Ave. C, Bayonne, N. J.
Stecher, Max. Herman (47)
94 Main St., Little Falls, N. J.
Steed, Oliver H. (47)
Letterman General Hosp., San Francisco, Calif.
Steele, Frank J. (42)
Y.M.C.A., Greenwich, Conn.
Steele, Robert E. (47)
303 Superior Ave., Tomah, Wis.
Steers, Arthur W. (48)
8448 Ridpath Dr., Hollywood 46, Calif.
Steffens, Ralph S. (49)
c/o Schering Corp., 2 Broad St., Bloomfield, N. J.
Steffens, Ralph S. (49)
Forgehill Rd., Changewater, N. J.
Stegel, T. R. (48)
216 College St., Jacksonville, Fla.
Steidle, Carl A. (47)
6312 Aspen Way, Cincinnati 24, Ohio.
STEIGER, KURT E. (40)
Kantonsapotheker, Freiestrasse 20, Zurich 7, Switzerland.
Steiger, Leonard William (27)
835 Summit Ave., Hackensack, N. J.
Steigmann, Frederick (46)
Dept. of Therapeutics, Cook County Hospital, Chicago 12, Ill.
Steimle, F. W. (46)
106 N. Main St., Washington, Ill.
Stein, Edward (49)
2763 N. 16th St., Milwaukee, Wis.
STEIN, ELDER H. (42)
119 Anita St., Pittsburgh 17, Pa.
Stein, Leonard (44)
23 E. 17th St., Brooklyn, N. Y.
Stein, Meyer (49)
1301 W. Columbia Ave., Philadelphia 22, Pa.
Stein, Wesley H. (49)
420 S. Birney, Bay City, Mich.
Steinberg, I. (43)
Physicians Drug Supply Co., 355 N. 3rd St., Philadelphia, 6, Pa.
Steinberg, Nathan (47)
1164-55th St., Brooklyn, N. Y.
Steinberg, Philip (44)
2936 W. Palmer Ave., Chicago, Ill.
Steinberg, Samuel (46)
963 Parkway Rd., Cleveland 8, Ohio.
Steiner, Albert P. (49)
1220 Ohio St., Fairfield, Calif.
Steiner, Henry J. (48)
1126 South Eighth St., Manitowoc, Wis.
Steinle, Louis V. (46)
557 W. 7th St., Cincinnati 3, Ohio.

Steinmann, Herbert R. (47)
58 Varick St., New York 13, N. Y.
Steinweiss, Saul Z. (46)
1 Sheridan Ave., Hohokus, N. J.
Steir, Philip (49)
6807 Abbott Ave., Miami Beach, Fla.
Stelzner, Herman M. (47)
3242 N. 24th Pl., Milwaukee 6, Wis.
Stem, William R. (46)
133 N. 60th St., Birmingham 6, Ala.
Stempel, Edward (47)
513 Glenmore Ave., Brooklyn 7, N. Y.
Stencil, Frank F. (46)
The Montefiore Hospital, 3459 5th Ave., Pittsburgh, Pa.
Stengel, Ernest (46)
151–155 W. Main, Berne, Ind.
Stepansky, Aaron (46)
3 Perkins Square, Jamaica Plain 30, Mass.
Stephens, Floyd M. (41)
Bynum Drug Co., Bynum, Ala.
Stephens, Frank (47)
Stephens Drug Store, Triangle, Va.
Stephenson, Boyd W. (48)
732 Sycamore Ave., San Bruno, Calif.
Stepner, Irving H. (49)
58 Walnut Ave., Revere 51, Mass.
Steppig, Oliver J. (40)
3929 Iowa Ave., St. Louis 18, Mo.
Sterling, Alonzo L. (46)
237 E. High St., Chestertown, Md.
Stern, Jerome (49)
701 W. Flagler St., Miami, Fla.
Stern, Joseph (49)
224 N. 6th St., Reading, Pa.
Stern, Lewis W. (47)
95 Madison Ave., New York 16, N. Y.
Stern, Nathan (45)
556 Eagle Ave., Bronx 55, N. Y.
Stern, Seymour (47)
991 President St., Brooklyn 25, N. Y.
Sterner, Joseph R. (47)
901 Market St., Perkasie, Pa.
Sternick, Bernard M. (49)
302 N. W. 10th Ave., Miami, Fla.
Sternicki, Stanislaus John (25)
6502 Fleet Ave., Cleveland, Ohio.
Sternig, Alex (47)
1534 Nelson Ave., Bronx 52, N. Y.
Stettner, Richard F. (49)
164 Division St., Elgin, Ill.
Steusloff, Norman J. (48)
1515 South Ave., Toledo 9, Ohio.
Steussy, Gerald H. (46)
c/o Clinic Pharmacy & Supply Co., Ft. Dodge, Iowa.
Stevens, Asa N. (34)
6157 E. St. Joe St., Indianapolis 1, Ind.
Stevens, Eli (47)
510–73rd St., Brooklyn 9, N. Y.
Stevens, Frederick F. (46)
7323 Third Ave., Brooklyn 9, N. Y.
Stevens, J. G. (49)
504–10th St., Huntington, W. Va.
Stevens, John J. (49)
c/o Postal Clerk, Fort Knox, Ky.
Stevens, Paul (49)
1651 N. Argyle Ave., Los Angeles 28, Calif.
Stevens, William S. (39)
2088 Jervis Rd., Columbus 12, Ohio.
Stevenson, John T. (47)
817 W. Church, Elizabeth City, N. C.
Stevenson, Ray F. (45)
2148 Maplewood Ave. Toledo 6, Ohio.
Steward, R. S. (36)
1734 N. Main St., Los Angeles, Calif.
Stewart, Barbara M. (48)
7811 E. Cole St., Downey, Calif.
Stewart, Charles L. (48)
1938 Oleander St., Baton Rouge, La.
Stewart, Earl D. (45)
230 Washington St., Mt. Vernon, N. Y.
Stewart, George Henry (45)
427 Center St., Taft, Calif.
Stewart, Jesse S. (49)
Fremont, N. C.
Stewart, John L. (48)
56 Chelsea Dr., Los Gatos, Calif.
Stewart, N. W. (40)
302 N. Central Ave., Phoenix, Ariz.
Stewart, Raymond K. (48)
927 Bryan Ave., Salt Lake City 5, Utah.
Stezzi, Louis R. (47)
916 Pierce St., Philadelphia 48, Pa.
Stickan, Henry F., Jr. (47)
R. R. 19, Box 617, Indianapolis 44, Ind.
Stidham, L. G. (49)
306 S. 6th St., Grants Pass, Oreg.
Stidham, R. Ford (41)
657 Haddon Rd., Oakland 10, Calif.
STIER, CARL (02)
335 Navarre Ave., Coral Gables 34, Fla.
Stier, Frank X. (46)
343 Probasco, Cincinnati 20, Ohio.
Stier, I. L. (43)
3407 Lakeshore Ave., Oakland, Calif.
Stiff, David C. (47)
718 E. 6th St., Flint 3, Mich.
Still, James C. (49)
Savage Drug Co., Sumpter, S. C.
Stimpson, L. R., Jr. (49)
60 Wall St., Wallingford, Conn.
Stimson, Russell H. (38)
1265 Cleveland Heights Blvd., Cleveland Heights, Ohio.
Stine, Kenneth (47)
2001 Broadway, Fort Wayne 6, Ind.
Stirnaman, Everette S. (46)
2603 E. Broadway, Long Beach 3, Calif.
Stock, Frederick J. (46)
21 Beechmont Ave., Bronxville, N. Y.
Stock, Raymond J. (49)
210—18th St., Rock Island, Ill.
Stockert, Geraldine J. (39)
Monmouth Memorial Hospital, Long Branch, N. J.
Stockhaus, Robert Paul Gustav (28)
16711 Dartmouth Ave., Cleveland 11, Ohio.
Stockholm, Raymond J. (47)
2411 Ryan Dr., Indianapolis, Ind.
STOCKING, CHARLES HOWARD (14)
250 Chemistry Bldg., Univ. of Michigan, Ann Arbor, Mich.
Stockmeyer, Oscar C., Jr. (47)
c/o Pewaukee Pharmacy, Pewaukee, Wis.
Stocks, Donald F. (45)
16200 Prest St., Detroit 27, Mich.
Stockton, Robert Dent (42)
301 S. Jennings, Fort Worth, Tex.
Stoddard, William M. (46)
Box 207, Brigham City, Utah.
Stodghill, Paul G. (37)
319–16th St., Denver 2, Colo.
Stoehr, John J. (49)
6049 Stanton Ave., Pittsburgh 6, Pa.
Stokes, A. A. (32)
16 Ardmore Rd., Forest Hill Village, Toronto, Ont., Canada.
Stokes, Homer A. (47)
2001 Bienville St., Selma, Ala.
Stokes, Homer S. (40)
3000 W. Cary St., Richmond 21, Va.
Stokes, R. C. (42)
School of Pharmacy Univ. of South Carolina, Columbia, S. C.
Stokes, Thomas E. (48)
7225 Verona Blvd., Pittsburgh, Pa.
Stokes, William A. (47)
839 Monroe St., Denver 6, Colo.
Stoklosa, Mitchell (37)
179 Longwood Ave., Boston 15, Mass.
Stoler, Myer (48)
101 N. Ellwood Ave., Baltimore 24, Md.
STOLL, FERDINAND DYONIZE (20)
10 Glamford Rd., Great Neck, L. I., N. Y.
Stoller, Minna. (47)
328 Erkenbrecher Ave., Cincinnati 29, Ohio.
Stoller, Nathan (49)
328 Erkenbrecher Ave., Cincinnati 29, Ohio.
Stolzenberg, Irving M. (43)
5549 Black St., Pittsburgh, Pa.
Stolzenburg, Richard W. (49)
2322 S. 8th St., Sheboygan, Wis.
Stone, Bertram M., Jr. (46)
2014 Polk St., Alexandria, La.
Stone, Carl (46)
116 West Foothill Blvd., Altadena, Calif.
Stone, George B. (49)
70 Parsons Dr., Hempstead, N. Y.
Stone, Kurt B. (46)
805 N. Alfred St., Los Angeles 36, Calif.
Stone, Leo (40)
146 Park Ave., East Orange, N. J.
Stonebraker, C. S. (37)
2156 Noble Rd., East Cleveland, Ohio.
Stoner, Dorothea F. (49)
1708 First St., Perry, Iowa.
Stoner, Walter B. (46)
1208 S. Market St., Inglewood, Calif.
Stopen, Michael (40)
441 Penn St., Perth Amboy, N. J.
Stoppel, Albert W. (46)
2933 Irving Park Rd., Chicago 18, Ill.
Stotlar, Jo (46)
101 S. Walnut St., Pinckneyville, Ill.
Stotler, Robert (49)
229 Beachley St., Meyersdale, Pa.
Stott, Marion M. (43)
1811 Kenyon St., N. W., Washington, D. C.
Stotts, L. O. (49)
103 W. Arch St., Searcy, Ark.
Stout, E. P. (39)
14820 Piedmont Blvd., Detroit, Mich.
Stout, Warren E. (49)
740 Parkway Ave., Trenton, N. J.
Stovall, Porter H. (49)
207 W. Boyd, Norman, Okla.
Stowe, Dora G. (44)
6303 W. Lloyd, Wauwatosa, Wis.
Straayer, George C. (42)
18 De Hart Rd., Maplewood, N. J.
Straayer, Henry J. (46)
369 W. Western Ave., Muskegon, Mich.
Strag, Harry (46)
716 New York Ave., Union City, N. J.
Straight, Fred S. (41)
193 Kanawha St., Buckhannon, W. Va.
Strait, Louis A. (44)
Univ. of California, 3rd and Parnassus Ave., San Francisco 22, Calif.
STRAND, MARTIN E. (20)
180 E. Grand Blvd., Detroit, Mich.
Strasburger, Melville (44)
10 W. Chase St., Baltimore, Md.
Strate, Herbert A. (17)
2930 Easton Rd., Cleveland, Ohio.
Strathie, A. J. (49)
24 S. State, Newtown, Bucks Co., Pa.
Stratton, Harold (46)
Cupsaw Lake, R. F. D., Wanaque, N. J.
Straub, Gilbert J. (47)
728½ N. Louise St., Glendale 6, Calif.
Straub, Warren W. (48)
10447 Breckenridge, St. Louis, Mo.
Straup, J. Wesley (47)
3rd & Spring Garden Sts., Easton, Pa.
Strauss, Leo (45)
4302 So. 16th St., Arlington, Va.
Strauss, Sanford J. (47)
14246 Superior Rd., Cleveland 18, Ohio.
Strawinski, Jay F. (49)
2104 Kentucky Ave., Baltimore 18, Md.
STREEPER, FRANK PARK (07)
8532 Germantown Ave., Philadelphia, Pa.
Streeper, Noall R. (49)
1607 N. Arthur, Pocatello, Idaho.
Streit, Rita Irene (47)
1020 Belden Ave., Chicago 14, Ill.
Streubel, Paul L. (47)
419 Clark St., Neenah, Wis.
Strevig, John A. (49)
3704 Elkader Rd., Baltimore 18, Md.

Strianse, S. J. (44)
490 E. 23rd St., Brooklyn, N. Y.
Stricklin, C. W. (46)
193 Main St., Shelby, Mont.
Striegel, H. S. (45)
1101 W. 79th St., Chicago 20, Ill.
Stringham, E. B. (45)
Shafter Drug, Shafter, Calif.
Strohmeier, Mrs. D. M. (42)
1430 W. 3rd St., Davenport, Iowa.
Strom, John Frederick, Jr. (46)
3209 15th W., Seattle 99, Wash.
Strommen, Richard S. (47)
826 Dempster St., Fort Atkinson, Wis.
Strother, W. D. (26)
School of Pharmacy, Univ. of Georgia, Athens, Ga.
STROUP, FREEMAN PRESTON (00)
43rd St. & Kingsessing Ave., Philadelphia 4, Pa.
Stroyan, Joseph (49)
2039 Campbell, Detroit 9, Mich.
Strozzi, Michael (44)
275 Niagara St., Buffalo 2, N. Y.
Strubel, Clarence J. (49)
745 Sheridan Rd., Kenosha, Wis.
Struckmann, Albert R. (47)
180 Oakwood Ave., Bogota, N. J.
Strudell, Donald (47)
2914 Brookdale Ave., Parnia, Ohio.
Strzelecki, Gene Jan (46)
2501 San Pablo Ave., Berkeley 2, Calif.
Stuart, Robert E. (47)
3157 Vineville, Ave., Macon, Ga.
Stubbe, Luella H. (46)
Mills Drug, Rapid City, S. Dak.
Stucker, Perry L. (46)
51 Hillwood Circle, Springhill, Ala.
Studer, F. D. (48)
4522 W. 16th Pl., Los Angeles 6, Calif.
Stuhr, Ernest T. (26)
8310 S. W. Canyon Dr., Portland 1, Oreg.
Stumpf, William K. (47)
217 No. Water, Milwaukee 2, Wis.
Sturdivant, Glenn C. (45)
Box 756, Tupelo, Miss.
Sturgeon, Leonard L. (47)
428 E. 14th St., Alton, Ill.
STURMER, JULIUS WILLIAM (01)
601 Lees Ave., Collingswood, N. J.
Sturner, Francis X. (45)
59 E. Parade Ave., Buffalo, N. Y.
Stutchin, A. D. (48)
428—10th Ave., Paterson 4, N. J.
Stutesman, Joe Richard (47)
912½ S. Tenth St., Noblesville, Ind.
Styles, Robert M. (47)
Box 61, Douglasville, Ga.
Styles, William A. (45)
19 Main St., Groveton, N. H.
Subervi, Henry L. (47)
30 Fort Greene Pl., Brooklyn, N. Y.
Suchow, David (47)
124 Magazine St., Newark 5, N. J.
Suchy, John F. (32)
c/o State University, Missoula, Mont.
Suda, Walter T. (46)
197 S. Paint St., Chillicothe, Ohio.
Sudar, Patricia (46)
8859 Crandon, Chicago 17, Ill.
Suding, Carl H. (42)
9224 S. 55th Ave., Oak Lawn, Ill.
Sudro, William F. (18)
State College Station, Fargo, N. Dak.
Suen, Helena D. (48)
YWCA, 105 S. Ashland Blvd., Rm. 415, Chicago, Ill.
Sulat, Joseph (47)
491 York Rd., Jenkintown, Pa.
Sullivan, Alphonso S. (49)
1206 Oak St., Columbia, S. C.
Sullivan, Daniel A. (40)
44 Main, Lancaster, N. H.
Sullivan, Francis J. (48)
Grace-New Haven Community Hospital, Pharmacy Dept., New Haven, Conn.
Sullivan, Patricia A. (48)
311 W. Wisconsin Ave., Oconomowoc, Wis.
Sullivan, Paul L. (48)
c/o Island Trees, 39 Pebble Lane, Levittown, N. Y.
Sullivan, Willard B. (49)
P. O. Box 1030, Big Spring, Tex.
Summerlott, Alva L. (45)
629 S. Burdick St., Kalamazoo 56, Mich.
Summerour, Thomas J. (48)
P. O. Box 237, Butler, Ga.
Summers, Clinton Dunbar (42)
349 Young Bldg., Honolulu, Hawaii.
Summers, Donald E. (47)
Box 11, Lake Villa, Ill.
Summers, Goff (48)
Ralston's Store, Weston, W. Va.
Summy, Charles L. (47)
362 A St., Corvallis, Oreg.
Summytt, E. T. (49)
225 Lithia Ave., Webster Groves, Mo.
Sundberg, Jack C. (47)
946 Lee Ave., Idaho Falls, Idaho.
Sundberg, Ronald P. (43)
991 Payne Ave., St. Paul, Minn.
Superczynski, Joseph F. (46)
448 Argonne Dr., New Kensington, Pa.
Supplee, Bert F. (45)
5106 Knox Ave., S., Minneapolis 9, Minn.
Suprenant, Henry (49)
92 Grand St., New Britain Gen. Hosp., New Britain, Conn.
Surber, Calvin E. (49)
238 S. Wayne Ave., Cincinnati 15, Ohio.
Surface, Arthur L. (49)
4301 S. W. 8th St., Miami 34, Fla.
Surgent, Michael G. (46)
1016 Kennedy Ave., Duquesne, Pa.
Survil, Anthony Adolph (43)
1009 Bayard St., Baltimore 23, Md.
Susina, Betty (45)
1232 Wenonah, Berwyn, Ill.
Susser, Harry (46)
718 Summit Ave., Union City, N. J.
Susses, Harry H. (47)
479 Cedar Lane, Teaneck, N. J.
Sussman, Daniel (47)
5607 Forest, East St. Louis, Ill.
Sussman, Donald C. (47)
2612 Carter #401, Detroit 6, Mich.
Sussman, Sholom (43)
33 E. Park Ave., Long Beach, N. Y.
Sussman, Solomon (49)
33 Academy Rd., Caldwell, N. J.
Sutherland, Eugene L. (48)
4062 Third St., Riverside, Calif.
Sutliff, David E. (49)
35410 Park, Wayne, Mich.
Sutterlin, William K. (48)
659 Beatty St., Trenton 10, N. J.
Suttlemyre, P. J. (44)
Box 755, Hickory, N. C.
Sutton, Ellen S. (46)
407 4th Ave., Royersford, Pa.
Sutton, O. R. (46)
309 Central Trust Bldg., Jefferson City, Mo.
Sutton, Robert J. (47)
382 Mt. Vernon, Gross Pointe Farms 30, Mich.
Suyehiro, Evelyn T. (48)
1227–19th St., Denver 2, Colo.
Suzuki, Naoshi (47)
137 Washington Blvd., Montebello, Calif.
Sveinson, H. Lindal (46)
Drayton, N. Dak.
Svihra, John, Jr. (46)
698 Seminary Ave., Rahway, N. J.
Swafford, William B. (47)
544 W. Clover Dr., Memphis, Tenn.
SWAIN, DR. ROBERT L. (09)
77–12 35th Ave., Jackson Heights, N. Y.
Swan, Ethel M. (47)
601–2nd St., Cresson, Pa.
Swan, Wayne H. (49)
Star Route, Box 94, Connellsville, Pa.
Swank, Edgar P. (48)
Greene & Carpenter Sts., Philadelphia 19, Pa.
Swanson, Donald A. (47)
Box 27, Ludlow, Pa.
Swanson, Edward E. (23)
Eli Lilly & Co., Indianapolis, Ind.
Swanson, G. B. (47)
Box 188, Edmonds, Wash.
Swarth, Oscar S. (46)
36–19—167 St., Flushing, N. Y.
Swatsburg, Harry (48)
103 York St., New Haven, Conn.
Sweeley, Carl F. (49)
16 George St., Greenfield, Mass.
Sweet, Leon A. (42)
1029 Cadieux Rd., Grosse Pointe Park 30, Mich.
Sweet, Norman Clyde (47)
R. F. D. 1, Box 110-A, Mooringsport, La.
Sweitzer, John E. (46)
18809 San Diego, Lathrup Townsite, Birmingham, Mich.
Swender, Paul (49)
3266 Locke Lane, Houston 19, Tex.
Swenson, Knud W. (49)
Rt. 1, Box 262, Pleasant Grove, Utah.
Swerdloff, Samuel (46)
1352 Murray Ave., Plainfield, N. J.
Swerdlow, Maurice M. (47)
101 Montgomery St., Bloomfield, N. J.
Swetmann, Elwyn (27)
Seward, Alaska.
Swett, Paula S. (46)
321 Woodridge Ave., Fairfield, Conn.
Swidler, Gerald (48)
236 Madison St., New York 2 N. Y.
Swintosky, Joseph V. (48)
Chemistry Bldg., Univ. Wis. Madison 6, Wis.
Swinyard, Ewart A. (45)
School of Pharmacy, Univ. of Utah Salt Lake City 1, Utah.
Swisher, Carl A. (38)
Cincinnati College of Pharmacy, 423 W. 8th St., Cincinnati, Ohio.
Swisher, Margaret C. (30)
University of Buffalo, Buffalo 14, N. Y.
Switzer, Charlie (49)
106 W. Jackson St., Hugo, Okla.
Switzer, Emmet B. (45)
1700 Grove St., Berkeley 4, Calif.
Switzer, Fred E. (46)
1700 Grove St., Berkeley 4, Calif.
Swoap, Orlo F. (46)
The Upjohn Co., Kalamazoo, Mich.
Sykes, Joe R. (49)
2752 Natchez Land, Memphis, Tenn.
Sykes, Richard L. (47)
29 W. College Ave., Iowa City, Iowa.
Sylvester, Lewis R. (48)
23 N. Wabash Ave., Chicago 2, Ill.
Szalay, Zoltan M. (48)
288 Hall Ave., Perth Amboy, N. J.
Szarnicki, Edward P. (47)
1267—8th Ave., Natrona, Pa.
Szczebak, Stanley F. (45)
347 Stony Hill Rd., R. F. D. 1, Springfield, Mass.
Szekely, Ivan J. (48)
College of Pharm., Univ. of Calif. The Medical Center, San Francisco 22, Calif.
Szymanski, Joseph R. (45)
684 Riverside Dr., New York 31, N. Y.
Szymczyk, Henry Frank (46)
51 Eldred Ave., Bedford, Ohio.
Szymkowski, Paul W. (47)
4836 S. Karlov Ave., Chicago 32, Ill.

## T

Tabak, Joseph (49)
5932 Catherine St., Philadelphia 43, Pa.
Taddiken, Paul G. (42)
282 Warren Ave., Hawthorne, N. Y.
Taege, Weldon J. (46)
4726 W. Capitol Dr., Milwaukee, Wis.
Tagliareni, Michael N. (45)
6000 Hudson Ave., West New York, N. J.
Tagmyer, Harry C. (46)
3431 Pary St., Pittsburgh 27, Pa.
Taiber, Edwin E. (28)
818 Monroe St., Lakeview-Hempstead, N. Y.
Taijala, Larry A. (49)
615 E. Sussex, Missoula, Mont.
Tainter, Dean (44)
Marion, N. C.
Tainter, Fred (46)
115 N. Main St., St. Charles, Mo.

Tainter, George W., Jr. (47)
1511—22nd Ave., San Francisco 22, Calif.
Tainter, Maurice L., (46)
Director of Research, Sterling-Winthrop Research Institute, Rensselaer, N. Y.
Takacs, Irene Emma (45)
2900 State St., McKeesport, Pa.
Takano, Frank N. (46)
1209 Yesler Way, Seattle 22, Wash.
Takemoto, Hiroshi (44)
P. O. Box 552, Loomis, Calif.
Talbot, David D. (48)
622 High St., Fall River, Mass.
Taliaferro, Guy E. (47)
Sheffield Pharmacy, Sheffield, Ala.
Taliaferro, Lawrence R. (45)
638 Coates St., Coatesville, Pa.
Taliaferro, Moncure M. (43)
7221 Staffordshire, Apt. 2, Houston, Tex.
Talias, Michael D. (47)
700 Sanford Ave., Newark 6, N. J.
Talisman, Leo (44)
305 Trenton Ave., Wilkinsburg, Pa.
Tallent, Ralph E. (47)
296 E. Main, Dayton, Tenn.
Tallon, Letitia F. (49)
303 E. 13th, Lexington, Nebr.
Tamargo, Margarita (49)
10 #456 (bet. 19 & 21) Vedado, Havana, Cuba.
Tamplin, James A. (41)
Tamplin-Dunaway Drug Co., Dallas, Ga.
Tanios, Roushdi A. (48)
Rue Khalig El Masri, N°709, Cairo, Egypt.
Tannenbaum, Sidney (46)
96-07 101st Ave., Ozone Park 5, N. Y.
Tanner, W. G. (49)
Elmwood, Wis.
Tanner, Wheaton D. (49)
109 S. Main St., Brillion, Wis.
Tansey, Robert, P. (45)
84 Underwood St., Newark 6, N. J.
Tapley, Mark W. (44)
Sterling Drug, Inc., 1450 Broadway, Room 1405, New York 18, N. Y.
Tapper, Martin (45)
1063 New Lots Ave., Brooklyn 8, N. Y.
Taquechel, Francisco (47)
Obispo 155, Havana, Cuba.
Tarczak, Frances R. (46)
35 B St., Buffalo 11, N. Y.
Tardiff, Louis E. (48)
6086 Linwood, Detroit 8, Mich.
Tarloski, Edward P. (46)
350 State St., Perth Amboy N. J.
Tarney, Jeannette C. (44)
2615 W. Tuscarawas St., Apt. 2, Canton, Ohio.
Tarrant, N. F. (49)
326 N. Van Dien Ave., Ridgewood, N. J.
Tarrant, Paul (49)
5391 First Ave. N., Birmingham 6, Ala.
Tarrant, W. G., Jr. (40)
305 S. Mulberry St., Richmond, Va.
Tarsenko, Edward (47)
5546 Roby Pl., Detroit 11, Mich.
Tart, Paul E. (49)
601 S. Layton Ave., Dunn, N. C.
Tashjian, John E. (45)
33 Glen St., Worcester 5, Mass.
Tasker, G. Carl (45)
Parke, Davis & Co., 130 Ninth St., San Francisco 3, Calif.
Tate, Anthony (44)
Box 474, Old Lancaster Rd., Devon, Pa.
Tate, Earl H. (48)
Box 311, Lenoir, N. C.
TAUB, ABRAHAM (23)
115 W. 68th St., New York, N. Y.
Taub, Raphael (44)
71 Washington St., Newark 2, N. J.
Taucher, Cora Jean (46)
Gill Hall Rd., R. D. 1, Clairton, Pa.
Taurozzi, Ralph J. (47)
443—65th St., West New York, N. J.
Tausz, Esteben Szabo (45)
Casilla 6011, Santiago, Chile, S. A.
Tawse, W. W. (49)
25 Park Ave., W., Mansfield, Ohio.
Taylor, Angus H. (43)
4000 Minnehaha Ave., Minneapolis, Minn.
Taylor, Arthur C. (44)
2902 E. 53rd St., Seattle 5, Wash.
TAYLOR, AUGUSTUS C. (35)
1733 Upshur St., N. W., Washington, D. C.
Taylor, A. Z. (46)
3400 Michigan, Detroit 16, Mich.
Taylor, Francis P. (38)
2236 La Salle Ave., Niagara Falls N. Y.
TAYLOR, FRANK OWEN (12)
205 E. 78th St., New York 21, N. Y.
Taylor, George O. (49)
2223c Calais Dr., Normandy Isle, Miami Beach, Fla.
Taylor, Guy C. (39)
P. O. Box 928, Decatur, Ill.
Taylor, Harold L. (49)
2457 Georgetown, Toledo 12, Ohio.
Taylor, Harry O. (47)
112 S. Water St., Sparta, Wis.
Taylor, John B. (44)
228 Princeton Ave., Bluefield, W. Va.
Taylor, John W. (45)
323 E. Main, Medford, Oreg.
Taylor, Laura H. (47)
2707 Lincoln Park Ave., Los Angeles 31, Calif.
Taylor, Lawrence David (25)
623 Elbart Ave., Webster Groves 19, Mo.
Taylor, Lucille B. (49)
Court House Circle, Monticello, Fla.
Taylor, R. Ben (49)
1555 Lamar Ave., Memphis, Tenn.
TAYLOR, R. J. (44)
75 Houston St., N. E., Atlanta 1, Ga.
Taylor, Romayne (47)
Kenmare, N. Dak.
Taylor, Wilbur H. (45)
590 Centre St., Jamaica Plain 30, Mass.
Taylor, William R. (46)
9247 Charlevoix, Detroit 14, Mich.
Taylor, Winifred F. (47)
P. O. Box 107, Jasper, Ala.
Tead, Richard D. (46)
2707 E. Pacific Coast Hwy., Long Beach 4, Calif.
Teakell, Wanda Lee (48)
3026 N. Harvey Parkway, Oklahoma City, Okla.
Teaker, M. D. (44)
3544 Rushland, Toledo 6, Ohio.
TEETERS, WILBUR JOHN (02)
Iowa College of Pharmacy, Iowa City, Iowa.
Tegeler, William H. (46)
207 Chestnut St., Audubon 6, N. J.
Teichholz, Bernard (47)
64 Prospect Ave., Hackensack, N. J.
Teichholz, Jack (46)
191 River Rd., Nutley 10, N. J.
Teilmann, Nina D. (44)
1011 Arbor St., Omaha 9, Nebr.
Teimer, Theodor, Jr. (47)
37 Morningside Rd., Verona, N. J.
Tell, C. O. (48)
225 E. 6th St., St. Paul 1, Minn.
Tempel, George F. (47)
1053 Grove St., Irvington 11, N. J.
Templeton, Bonnie C. (43)
c/o Los Angeles County Museum, Exposition Park, Los Angeles 7, Calif.
Templeton, Donald James (47)
39 West St., Easthampton, Mass.
Tenhoff, Charles J. (30)
Balaton, Minn.
Tennyson, Irving A. (28)
1835 I St., N. W., Washington, D. C.
Tepper, Meyer (45)
7821 W. Chester Pike, Highland Park, Pa.
Terlizzese, Michael (49)
29 Mitchell Pl., White Plains, N. Y.
Terrell, Harold (42)
874 Garland St., Memphis 7, Tenn.
Terrill, J. L. (48)
730Washington, Minneapolis, Minn.
Terris, Harry H. (44)
155 Honey, Battle Creek, Mich.
Terry, David (46)
1059 Broad St., Bloomfield, N. J.
Terry, James H. (47)
Sonora, Ky.
Terry, Julius (47)
554 Bloomfield Ave., Verona, N. J.
TERRY, RALPH EUGENE (20)
808 S. Wood St., Chicago 12, Ill.
Terry, Robert W. (43)
Box 3182, Sta. B, Columbus 2, Ohio.
Terwilliger, George W. (46)
1704 Central, Memphis, Tenn.
Terwilliger, Grove F. (49)
249 Superior St., Rossford, Ohio.
Teshima, Henry (47)
395th Med. Station Hosp., APO-710 Nagoya, c/o Postmaster, San Francisco, Calif.
Testa, Dorothy E. (44)
645 E. 14th St., New York, N. Y.
Testa, Robert J. (48)
2438 Woodstock Ave., Pittsburgh 18, Pa.
Testo, Gloria (46)
755 Washington Ave., Bridgeport, Conn.
Teti, Catherine (47)
2349 S. Tenth St., Philadelphia 48, Pa.
Thackray, James C. (42)
Box 844, Los Gatos, Calif.
Thagard, O. L., Jr. (45)
Thagard Drug Co., Andalusia, Ala.
Thal, Sanford M. (46)
2412 Peabody St., Bellingham 21, Wash.
Thatcher, Raymond L. (41)
32 Marion Rd., Verona, N. J.
Thaw, David B. (46)
19 E. Garden Ter., N. Arlington, N. J.
Thawley, W. A. (47)
604—11th Ave., Prospect Park, Pa.
Thaxton, Edna L. (48)
1614 O'Dell Ave., Charleston 2, W. Va.
Thaxton, William H. (49)
161 Woodlawn Ave., N. W., Canton, 8, Ohio.
Thayer, J. R. (37)
4588 Parkview Pl., St. Louis, Mo.
Thayer, William L. (45)
760 Washington St., Dorchester 24, Mass.
Thebus, John A. (46)
1611 Tremont, Denver 2, Colo.
Theller, Arthur H. (46)
195 Second Ave., Tiffin 9, Ohio.
Thesen, Harry J. (48)
6975 N. Bell Ave., Chicago 45, Ill.
Thibodeaux, Aurelian (46)
Wagels Pharmacy, Crowley, La.
Thiel, Anna D. (43)
225 E. 2nd St., Hialeah, Fla.
Thiel, William (47)
541 S. Main St., Fond du Lac, Wis.
Thiele, A. H. (47)
1106-11th St., Racine, Wis.
Thimmesch, Arnold J. (47)
3801 W. Center St., Milwaukee 10, Wis.
Thoennes, Lawrence A. (47)
4445 Montana, Chicago 39, Ill.
Thomas, Arthur W. (39)
Havemeyer Hall, Columbia Univ., New York 27, N. Y.
Thomas, Charles A. J. (45)
421 N. New St., West Chester, Pa.
Thomas, Earl R. (48)
29 Woodlyn Ave., Pitman, N. J.
Thomas, Edward E. (47)
617 W. 38th St., Norfolk 8, Va.
Thomas, Emmett N. (48)
2128th ASU (Sta. Hosp.), Fort Knox, Ky.
Thomas, Fred E. (38)
726 W. North, Greenfield, Ind.
Thomas, George B. (49)
Corning Glass Works, Corning, N. Y.
Thomas, G. Stanley (44)
Burtonsville, Md.
Thomas, Jared H., Jr. (47)
Box 538, Cheney, Wash.
Thomas, John E. (46)
850 Madison Ave., New York 21, N. Y.
Thomas, Joseph Young (47)
c/o W. Sam Jones, Franklin, Va.
Thomas, Lee Aquilla (49)
P. O. Box A, Williston, Fla.
Thomas, Lloyd (49)
2435 N. Springfield, Chicago, Ill.
Thomas, Marvin A. (44)
1227 M., Sweet Home, Oreg.
Thomas, Otis V. (46)
Box 323, Breaux Bridge, La.

THOMAS, PAUL J. (36)
1821 Ontario Place, N. W., Washington, D. C.
Thomas, Perry K., Sr. (45)
826 Jefferson St., Tupelo, Miss.
Thomas, Ralph S. (45)
Childers Prescription Shop, 1st National Bank Bldg., Independence, Mo.
THOMAS, ROBERT (88)
108 S. Broad St., Thomasville, Ga.
Thomas, Stanley J. (46)
Merced General Hospital, Merced, Calif.
Thomas, Waldo I. (48)
3917 W. Roosevelt, Milwaukee 10, Wis.
Thomczek, Louise M. (49)
11327 Berwick St., Los Angeles 24, Calif.
Thomke, Grace LaBurt (47)
P. O. Box 477, Everett, Wash.
Thompson, A. A. (46)
120 S. Houston, San Benito, Tex.
Thompson, Arthur M. (43)
Childrens Hospital, Boston, Mass.
Thompson, Barnard (47)
1408 Somerset Rd., Grosse Pointe 30, Mich.
Thompson, Byron M. (46)
1729 W. 106th St., Chicago 43, Ill.
Thompson, Clayton I. (47)
406 Bittwell Apts., Fort Dodge, Iowa.
Thompson, Edward C. (47)
Augustag, Ark.
Thompson, Fred P. (49)
1050 Williams St., Maysville, Ky.
Thompson, Guy L. (47)
West Point, Nebr.
Thompson, Harry J. (48)
750 Lynton St., Jacksonville 8, Fla.
Thompson, H. L. (17)
930 Bryan Ave., Salt Lake City 5, Utah.
Thompson, Herman O. (49)
University of North Carolina, Chapel Hill, N. C.
Thompson, J. K. (45)
Box 517, Pendleton, Oreg.
Thompson, Jack R. (45)
P. O. Box 479, Richmond, Ind.
Thompson, James L. (49)
Reidsville, N. C.
Thompson, James T. (47)
131 E. High, Jefferson City, Mo.
Thompson, John A. (48)
3106 S. E. 50th Ave., Portland 6, Oreg.
Thompson, John E. (48)
729 Titus Ave., Rochester 5, N. Y.
Thompson, John R. (46)
641 Summerlea St., Pittsburgh 6, Pa.
Thompson, Joseph S. (49)
R. D. 7, Butler, Pa.
Thompson, Katherine Wilcox (33)
Route No. 1, Whalen Rd., East Rochester, N. Y.
THOMPSON, LEON ALBERT (07)
Sorrento, Maine.
Thompson, Lewis (45)
P. O. Box 13, Vicksburg, Miss.
Thompson, Marvin R. (30)
P. O. Box 1132, Stamford, Conn.
Thompson, Mildred Whitten (45)
P. O. Box S, Coon Rapids, Iowa.
Thompson, Robert Edward (47)
Box 224, Lisle, Ill.
Thompson, Ronald D. (49)
Main & Oxford Sts., Otterbein, Ind.
Thompson, Rufus L. (46)
U. S. Naval Hospital, Oakland 14, Calif.
Thompson, Spencer S. (47)
P. O. Box 737, Lufkin, Tex.
Thompson, Thomas W. (47)
Route 4, Mt. Vernon, Wash.
Thompson, Walter B. (45)
Box 1153, G. P. O., Providence, R. I.
Thompson, W. D. (45)
Main St., Folkston, Ga.
Thompson, William E. (45)
c/o McKesson & Robbins, P. O. Box 721, Springfield 1, Mass.
Thoms, Richard (45)
1224–12th St., N., Fargo, N. Dak.
Thomure, Francis A. (47)
106 N. Silver St., Olney, Ill.
Thorne, Edward A. (47)
168 Nassau St., Princeton, N. J.
Thorne, Herbert E. (49)
30 Washington Ave., Old Orchard Beach, Maine.
Thorning, Dewey H. (47)
918 Monroe St., Gretna, La.
Thornley, Roy M. (49)
Moncks Corner, S. C.
Thorpe, Melvin A. (46)
3600 N. Second St., St. Louis 7, Mo.
Thorpe, Theresa Eris (46)
2714–12th St., N. E., Washington 18, D. C.
Thorsteinsson, Scheving (49)
Reykjavidur Apotek, Reykjavik, Iceland.
Thorstenson, Odin (39)
1426 Fourth Ave., Seattle, Wash.
Threadgill, James N. (48)
327 Adams St., Decatur, Ga.
Throckmorton, Lloyd Earl (43)
600 Main St., Peoria, Ill.
Thurman, George L. (49)
841 E. 63rd St., Chicago 37, Ill.
Thurston, Emory W. (40)
1207 S. Vermont Ave., Los Angeles, Calif.
Thurston, Henry H. (47)
3223 Mountain View Ave., Los Angeles, Calif.
Tibaldi, Victor A. (48)
28–46—200th St., Bayside, L. I., N. Y.
Tibbals, H. Munson (49)
23 N. Central Ave., Umatilla, Fla.
TIBBETTS, THEODORE R. (46)
17 Fairview Ave., Augusta, Maine.
Tice, Linwood F. (31)
43rd & Kingsessing Ave., Philadelphia 4, Pa.
Tichar, Joseph V. (48)
22430 Ivan Ave., Euclid 23, Ohio.
Tidmore, George W. (48)
613 W. Hickory, Denton, Tex.
Tiegen, Hjalmar O. (19)
6172 California Ave., Long Beach 5, Calif.
Tielinen, Helga T. (44)
337 Oak Neck Rd., Bay Shore, N. Y.
Tiesler, Adolph Edward (47)
373 Kinderkamack Rd., Westwood, N. J.
Tiffin, Joseph E. (46)
N. 3301 Argonne, Millwood, Wash.
Tighe, Edward W. (47)
824 N. Lime St., Lancaster, Pa.
Tigner, Mrs. F. H. (45)
Greenville, Ga.
Tigrett, James M. (46)
Dumas, Miss.
Tilford, James K. (47)
237 S. Market, Wichita 2, Kan.
Tillery, J. Pete (47)
2162 Ingleside Ave., Macon, Ga.
Tilley, John L. (46)
4138 45th, San Diego 5, Calif.
Tilley, Marie (49)
3344 N. 53rd, Omaha, Nebr.
Tillitson, Edward W. (43)
255 Ridgemont, Grosse Pointe Farms 30, Mich.
Tillman, Sydney (48)
3303 Juliet St., Pittsburgh 13, Pa.
Tilly, Ralph S. (46)
c/o Tilly Drug Co., Rome, Ga.
Timblin, William Clyde (46)
136 Madison St., Port Clinton, Ohio.
Timm, Marvin A. (49)
916 E. Broadway, Toledo 5, Ohio.
Timmers, Melvin H. (46)
2218 LaFollette Ave., Manitowoc, Wis.
Timmons, Christian L. (48)
1114—5th St., Hartsville, S. C.
Timolat, Jas. G. (28)
59 Fourth Ave., New York, N. Y.
Tindall, James W. (44)
1998 N. Capitol St., Salem, Oreg.
Ting, Peggy (44)
28 Salmon St., San Francisco 11, Calif.
Tingle, James C. (36)
98 Aberdeen Rd., Hampton, Va.
Tingley, Jean B. (47)
2725 Martin Ave., Omaha, Nebr.
Tingley, Warren Albert (46)
c/o Lobby Drug, Hotel Sherman, 116 W. Randolph St., Chicago, Ill.
Tinkham, Alfred F. (44)
129 Medford St., Malden, Mass.
Tirrell, Newell W. (36)
Maple St., Warren, Mass.
Tischbein, Harry J. (47)
21 Carew Tower Arcade, Cincinnati, Ohio.
Tisher, Harold L. (47)
1120 Walnut, Yankton, S. Dak.
Tislow, Richard (45)
Marlboro Inn, 334 Grove St., Montclair, N. J.
Title, Irwin A. (49)
3014 Maxwell St., Los Angeles 27, Calif.
Titus, Frank D., Jr. (45)
38 S. Garfield Ave., Alhambra, Calif.
Tkacheff, Joseph, Jr. (47)
1 Fifth Ave., Saratoga Springs, N. Y.
Tkacz, Stanley J. (41)
P. O. Box 158, Nashua, N. H.
Toalson, Ernest B. (47)
5417 Walsh St., St. Louis 9, Mo.
Tobey, Alton P. (49)
Lafayette Rd., Hampton, N. H.
Tobias, Quentin (42)
1714 Ard-Eevin, Glendale 2, Calif.
Tobias, Roscoe H. (47)
R. R. #3, Hoy Ave., Lebanon, Ind.
Tobin, Bernard (49)
3633 E. 146 St., Cleveland 20, Ohio.
Tobin, Dorothy Elaine (43)
Foote Memorial Hospital, Jackson, Mich.
Tobin, Meyer (48)
244 Powers St., New Brunswick, N. J.
Tobis, Abe (46)
4401 W. Adams Blvd., Los Angeles 16, Calif.
Tobleske, Morris R. (47)
2100 W. Wells, Milwaukee, Wis.
TOCCO, ORAZIO (10)
760 N. Hoover St., Los Angeles 24, Calif.
Todd, Paul H. (20)
Box 591, Kalamazoo, Mich.
Todd, William Cuninghame (45)
P. O. Box 1569, Mobile 9, Ala.
Todt, Olaf J. (43)
8101 W. Vernor Hgwy., Detroit, Mich.
Tognini, Arthur F. (41)
15 Chester, Bakersfield, Calif.
Tolar, Ralph C. (42)
2917 Pinehurst Rd., Richmond, Va.
Tolchinsky, David (47)
1308—119th St., Whiting, Ind.
Toller, Adolph J. (16)
600 Pierce St., Sioux City, Iowa.
Tollison, Joseph H. (48)
Academy Apts., Spring St., Greenwood, S. C.
Tomaino, Ralph (44)
304 Chestnut St., Roselle Park, N. J.
Tomczak, Walter C. (47)
7769 Mack Ave., Detroit 14, Mich.
Tomhave, John B. (38)
215 N. 1st St., Montevideo, Minn.
Tomihiro, Tadashi Todd (43)
510 N. Fifth St., San Jose 11, Calif.
Tomkin, Irvin (45)
7167 N. 20th St., Philadelphia, Pa.
Tomlinson, Estelle (44)
3051 N. Cramer St. Milwaukee 2, Wis.
Tommes, E. (48)
c/o Mr. J. P. Wallenborn, 21, rue des roses, Luxembourg, Europe.
Tompkins R. D. (45)
Donegal Ranch, Langley, Wash.
Tonjec, Daniel D. (46)
3736 Utah St., San Diego 4, Calif.
Toomey, Arthur Reynolds (45)
P. O. Box. 147, Wall St. Sta., New York 5, N. Y.
Topley, William F. (47)
745 Sonoma St., Vallejo, Calif.
Toran, Harry (48)
521 E. 22nd St., Chester, Pa.
Torchia, Francis V. (47)
104–25—205th St., Hollis, N. Y.
Torchia, Louis A. (48)
859 N. Broadway, Los Angeles 12, Calif.
Toribio, Mary (46)
2909—12th St., Tampa 5, Fla.
Torigian, Puzant C. (49)
222-23 Davenport Ave., Queens Village, N. Y.

Tornow, Paul (48)
c/o Callisons, Chehalis, Wash.
Toro, Cesar A. (45)
16 Allen St., San Juan, P. R.
Torrence, Charland B. (46)
536 E. 84th, Seattle 5, Wash.
Torres-Diaz, Antonio (45)
Box 3081, San Juan, P. R.
Torres-Diaz, Luis (42)
College of Pharmacy, Univ. of Puerto Rico, Rio Piedras, P. R.
Toshiyuki, John Y. (47)
2035 Sawtelle Blvd., Los Angeles 25, Calif.
Tosi, John J. (48)
346 S. Liberty, Blairsville, Pa.
Totten, Henry R. (49)
Box 247, Chapel Hill, N. C.
Totzka, Jerry C. (42)
19303 Forrer St., Detroit 19, Mich.
Tousman, Bernard C. (47)
3546 N. Oakland Ave., Milwaukee 11, Wis.
Tow, Yen H. (43)
312 Ohio Ave., Providence, R. I.
Towaij, Abbass Jawad (46)
c/o F. W. Edwards, Westminister City Council Depot, Monck St., London, S. W. 1, England.
Towne, Beverly F. (48)
333 S. Fair Oaks Ave., Pasadena 2, Calif.
Towne, Charles Gilbert (47)
1620 Rosehedge Dr., Whittier, Calif.
Townsend, Everett A. (49)
2142 N. Palmer, Milwaukee 12, Wis.
Tozer, George A. (35)
2729 Colby, Everett, Wash.
Trachtenberg, Samuel (48)
209 Moore St., Philadelphia 48, Pa.
Trager, Saul (48)
180 Huntington Terrace, Newark 8, N. J.
Trahan, Alfred (40)
3916 Banks St., New Orleans 19, La.
Trainor, Eugene R. (49)
3738 Spencer Ave., Norwood 12, Ohio.
Trancik, Edward (47)
7000 Michigan Ave., Detroit 10, Mich.
Tranner, Frank (43)
6½ Orchard St., Norwalk, Conn.
Travers, Glenn E. (45)
1317 Harmom Pl., Minneapolis 3, Minn.
Travis, A. Jerome (49)
532 Kedzie St., Evanston, Ill.
Traxler, Seymour D. (46)
350 E. Armour Blvd., Apt. #311, Kansas City, Mo.
Treadwell, Joe W. (44)
4440 Clay, Houston 3, Tex.
Treese, Lloyd Richard, Jr. (47)
R. D. Box 154, Hollidaysburg, Pa.
Trevis, Margaret N. (48)
7207 Ivy Ave., Cleveland 4, Ohio.
Tribbett, Margaret (46)
1740 Gurtler Court, Apt. 3, Orlando, Fla.
Tricarico, Donato M. (49)
131 Fairview Ave., Somerville, N. J.
Trichilo, Theodore J. (45)
4802½ Telegraph Ave., Cakland 9, Calif.
Triggs, Alice (48)
716 Park Ave., South Pasadena, Calif.
Trimble, Guy H. (48)
2532 S. Adams St., Arlington, Va.
Trinque, Arthur J. (45)
72 N. Main St., Randolph, Mass.
Tripeny, John B. (32)
241 S. Center St., Casper, Wyo.
Tripi, Anthony (46)
324 Truxtun Ave., Bakersfield, Calif.
Tripler, James (46)
926 44th St., Brooklyn, N. Y.
Triplett, Gordon A. (44)
Osgood, Ind.
Triplett, William M. (46)
Long Beach, Miss.
Tripp, Charles R. (46)
1315 First Ave., East Spencer, Iowa.
Trisler, Thomas O. (47)
Merck & Co. Inc., St. Louis 11, Mo.
Tropp, Morris L. (46)
208 Schneider Bldg., St. Joseph, Mo.
Trotman, Robert (47)
234 N. 11th, Merrill, Oreg.
Trotter, Harold O. (29)
267 Berkley Rd., Indianapolis 8, Ind.
Trotter, James M. (47)
412 E. Mulberry St., 6C, Lancaster, Ohio.
Troupin, E. S. (40)
85-12 Blvd., Rockaway Beach, N. Y.
Troxclair, Felix J. (46)
5122 Camp St., New Orleans 15, La.
Troxell, Hornor (44)
97 Fairmont Ave., Fairmont, W. Va.
Troxler, Thelbert L. (46)
1412 13th Ave. S., St. Petersburg 7, Fla.
Trudeau, Leonel J. (46)
375 Massadesic St., Manchester, N. H.
Trudeau, Robert I. (47)
62 State St., East Orange, N. J.
Truebe, Carl (41)
Main St., Old Saybrook, Conn.
Truitt, Edward B. (44)
2606 Longwood St., Baltimore 16, Md.
Trulli, Martin (47)
305 Mar Vista Ave., Pasadena, Calif.
Trumpold, Emil H. (45)
316 Bowdoin St., Dorchester, Mass.
Trupp, Malcolm S. (40)
Pickwick Plaza, 6656 Plaza Rd., Houston, Tex.
Tsao, Daniel P. N. (48)
College of Pharmacy, Univ. of Washington, Seattle 5, Wash.
Tschauner, Ralph L. (49)
407 W. 3rd St., Claremore, Okla.
Tschiffely, Douglas (41)
1224 Connecticut Ave., Washington, D. C.
Tucci, Ralph G. (49)
53 Standish St., Cambridge 38, Mass.
Tucker, Arthur L. (45)
Tucker's Drug Store, Dadeville, Ala.
Tucker, Alex Lee (45)
Dadeville, Ala.
Tucker, Francis S. (45)
Camp Hill, Ala.
Tucker, Frank T., Jr. (46)
900 Chestnut St., Atlantic, Iowa.
Tucker, Glendon E. (49)
c/o Hewitt's Drug Store, 4th & E, Anchorage, Alaska.
Tucker, Jacob (47)
1627 Curry Dr., Cleveland 24, Ohio.
Tucker, Louis (47)
655 Burke Ave., Bronx 67, N. Y.
Tucker, Robert L. (47)
2937 N. W. 11th, Oklahoma City, Okla.
Tucker, Stanley J. (48)
3 W. Gilman St., Madison, Wis.
Tueller, Reed O. (48)
2465 S. 15th East, Salt Lake City, Utah.
Tufts, C. D. (45)
1077 Elm St., Manchester, N. H.
Tuite, Bernard J. (47)
86 Anderson St., Hackensack, N. J.
Tull, Richard L. (46)
Blue Valley, Veterans Project 41A, Kansas City, Mo.
Tulloch, Ralph M. (49)
c/o Wiley Drug Co., Twin Falls, Idaho.
Tumas, John (45)
Gallinger Hospital, Washington 3, D. C.
Tuominen, Elmer A. (47)
Box 115, Moss Beach, Calif.
Turano, Clara Cornelia (45)
713 Wallace St., Vandergrift, Pa.
Turber, Fred W. (47)
609 W. Emerson St., Princeton, Ind.
Turco, Paul (49)
726 Butler Ave., New Castle, Pa.
Turkel, Henry (49)
650 W. Boston Blvd., Detroit 2, Mich.
Turley, Robert Milner (47)
633 E. 83rd Pl., Chicago 19, Ill.
Turnbull, Walter J. (41)
1683 Edison Ave., Detroit 6, Mich.
Turner, Ernest C. (47)
817 Fourth Ave., Grinnell, Iowa.
Turner, George M. (46)
40 Lindberg St., Slater, S. C.
Turner, Harry Charles (43)
304 N. Boyle Ave., Los Angeles 33, Calif.
Turner, James R. (47)
2727 Menlo, Los Angeles, 7 Calif.
Turner, Leonard Garland (42)
Box 332, Tazewell, Va.
Turner, Menlo Clayton (47)
3711 Glenrose, Altadena, Calif.
Turner, R. G. (41)
Brandon, Wis.
Turner, Richard T. (47)
McGraw-Hill Int. Corp., 330 W. 42nd., New York 18, N. Y.
Turner, Thomas David (18)
Henning, Tenn.
Turner, W. Fred (47)
86 Water, Box 313, Skowhegan, Me.
Turpin, Roy (49)
Liberty, Ky.
Turville, Fred. C. (48)
1235 S. E. 26th Ave., Portland 15, Oreg.
Tutor, Jessie B. (46)
3702 Royal Rd., Meridian, Miss.
Twomey, John P. (46)
8052 Westlawn Ave., Los Angeles 45, Calif.
Tye, Frank J. (44)
1201 W. Erie Ave., Philadelphia 40, Pa.
Tyler, Varro E., Jr. (49)
Academy Rd., Cheshire, Conn.
Tysdal, Even M. (36)
325 W. Huron St., Chicago 10, Ill.
Tyson, J. W. (44)
124 S. Green St., Greensboro, N. C.
Tzinberg, Dave L. (48)
3902 Hereford St., St. Louis 9, Mo.

## U

Uban, Chester W. (49)
1108 E. Virginia St., Peoria 4, Ill.
Ude, George Edgar (46)
Box 432, Morenci, Ariz.
Udell, Bernard B. (46)
1596 Eastern Parkway, Brooklyn 33, N. Y.
Ueber, William J. (49)
2021 Kilburn Ave., Rockford, Ill.
Uehrke, George C. (48)
1546 Mohawk St., Chicago, Ill.
Uffelman, Richard V. (48)
Rt. 4, Box 20, Milwaukie 22, Oreg.
Uhl, Arthur H. (28)
School of Pharmacy, Univ. of Wisconsin, Madison, Wis.
Uhlfelder, David R. (47)
2300 Upland Pl., Cincinnati 6, Ohio.
UHLICH, F. G. (81)
3703 N. 20th St., St. Louis, Mo.
Ulan, Martin S. (41)
1 Lincoln Ave., Newark, N. J.
Ullrich, Wilfrid J. (46)
403 Main St., Aurora, Ind.
Ulman, Bernard (41)
314 Light St., Baltimore 2, Md.
Ulman, John C. (45)
693 La Salle Ave., Buffalo 15, N. Y.
Ulrey, J. C. (49)
2 N. Leroux, Flagstaff 1, Ariz.
Ulrich, Frank P. (46)
Morgan, Utah.
Ulves, Elmer (45)
929 Descanso Dr., La Canada, Calif.
Umemoto, Masao (49)
5318 Victor Ave., 2 C, Richmond, Calif.
Umenhofer, A. Melvin (46)
2405 N. Halsted St., Chicago 14, Ill.
Unanue, Enrique M. (47)
17 esq. a 4, Vedado, Havana, Cuba.
Ungar, Dan (49)
768 Linden Blvd., Brooklyn 3, N. Y.
Unmuth, Martin M. (43)
208 E. Wisconsin Ave., Appleton, Wis.

Unsworth, Kenneth W. (47)
12 Independence St., Tarrytown, N. Y.
Upchurch, William D. (47)
188 S. Bellevue, Memphis 4, Tenn.
Updegraff, Kenneth M. (47)
631 Knott, Bakersfield, Calif.
Updike, Glenn Brady (43)
443 Main St., Danville, Va.
Upton, Joseph P. (47)
Livingston, Tenn.
Urban, Joseph J. (48)
1949 Hubbard, Detroit 9, Mich.
Urban, Peter P. (48)
1949 Hubbard, Detroit 9, Mich.
Urbani, Arthur J. (46)
708 Westmoreland Ave., Jeannette, Pa.
Urbani, Richard A. (48)
708 Westmoreland Ave., Jeannette, Pa.
Urbanowicz, Henry J. (43)
714 Beech St., Manchester, N. H.
Urda, Peter J. (46)
308 Main Ave., West Aliquippa, Pa.
Urdang, Arnold (44)
130-28 229th St., Laurelton, L. I., N. Y.
Urovsky, Nat (49)
1607 Nedro Ave., Philadelphia 41, Pa.
Urwin, Helen (45)
1026 Oakwood Ave., Toledo 7, Ohio.
Ushkow, Samuel (37)
751 St. Mark's Ave., Brooklyn, N. Y.
Utzinger, Albert V. (46)
1018 Kenyon Ave., Plainfield, N. J.

## V

Vacante, Pasqualino J. (49)
164 Hutton St., Jersey City 7, N. J.
Vachon, George F. (49)
2149 Watson Ave., St. Paul 5, Minn.
Vadeboncoeur, Walter N. (45)
c/o McKesson & Robbins, Inc., P. O. Box 1247, Syracuse 1, N. Y.
Vadheim, Joseph (28)
Tyler, Minn.
Vaikasas, Casimir J. (31)
1749 S. Halstead St., Chicago, Ill.
Valbracht, Walter W., Jr. (48)
310 W. 1st, Carrollton, Mo.
Valcourt, Alfred J. (47)
343 Anthony St., Fall River, Mass.
Valenti, Basil J. (44)
9803 McCracken Blvd., Cleveland Ohio.
Valenti, James C. (47)
5701 W. Burnham St., West Allis 14, Wis.
Valentine, D. M. (45)
1500 S. Del Mar Ave., San Gabriel, Calif.
Valentine, George A. (46)
150 S. Lincoln St., Washington, Pa.
Valentine, Vernon (49)
New Castle, Ky.
Vallario, Michael (47)
357 Totowa Ave., Paterson 2, N. J.
Vamvas, Michael D. (44)
Worcester State Hospital, Worcester, Mass.
Van Aller, Godfrey Harry (42)
3603 17th St., Gulfport, Miss.
VAN ANTWERP, JAMES C. (05)
905 Van Antwerp Bldg., Mobile 12, Ala.
Vanatta, Howard L. (45)
204 Main St., Chico, Calif.
Vance, Clarence J. (47)
South Highlands Infirmary, Birmingham, Ala.
Van Crane, June (48)
Box 21, Corning, Calif.
Vande Bunte, Harold (47)
424 Van Raalte Ave., Holland, Mich.
Vandel, Frederick M. (48)
Hq. E.U.C.O.M., P. & A. Div., c/o P.M., A.P.O. 403, New York, N. Y.
Vanderkleed, Chas. E. (32)
200 Harvard Ave., Collingswood, N. J.
Vander Leest, H. R. (45)
525 Main St., Juneau, Alaska.
Vander Wyk, Raymond W. (47)
179 Longwood Ave., Boston 15, Mass.
Vandever, Enoch (47)
#136 Ave. A., S. E., Winter Haven, Fla.
Vande Voort, Mary Jane (44)
Univ. Hospital Pharmacy, Iowa City, Iowa.
Van DeWalle, Chas. F. (48)
513 S. Main Ave., Sioux Falls, S. Dak.
Van Dyke, Robert C. (49)
1414 School St., Chicago 13, Ill.
Vanek, Otto M. (47)
6001 W. 26th St., Cicero 50, Ill.
VanGeli, B. James (46)
6 Main St., McGraw, N. Y.
Van Gorder, George (44)
McKesson & Robbins, Inc., 155 E. 44th St., New York 17, N. Y.
Van Horne, Robert L. (46)
108 Templin Park, Iowa City, Iowa.
Van Lopik, J. A. (46)
Castle Rock, Colo.
Van Meter, Clarence Taylor (29)
199 Argyle Pl., Arlington, N. J.
Van Montfrans, Albert J. (48)
c/o Lago Oil Transport Co., Ltd., P. O. Box 867, Aruba, Netherlands West Indies.
Vannatta, Enos E. (46)
103 N. Adams St., Mt. Vernon, Ohio.
Van Nostrand, H. N. (36)
Rockledge Rd., Bristol, Tenn.
Van Schaack, Sigrid M. (36)
614 Linden Ave., Wilmette, Ill.
Van Slyke, Clinton E. (44)
669 Parkside Ave., Buffalo, N. Y.
Van Vleck, Harry J. (48)
40 Van Schoick Ave., Albany 3, N. Y.
Van Winkle, Clay (49)
600 W. High St., Mount Vernon, Ohio.
Varano, Carmine (46)
700 7th St., Union City, N. J.
Varblow, Lawrence Wm. (44)
514 Curtis St., Albany 6, Calif.
Varela, Octavio A. (47)
Laboratorios Sanitas, Calle 15 de Septiembre, Managua, Nicaragua.
Varga, Frank L. (43)
1308 Northampton St., Easton, Pa.
Varisco, Josephine (46)
508 Pailet St., Harvey, La.
Varner, Eliott William (45)
Main & Front Sts., Senatobia, Miss.
Varner, Sally J. (49)
1523 Woodland, N. E., Warren, Ohio.
VARNEY, EDWARD FRANCIS (92)
300 Taurus Ave., Oakland, Calif.
Varnum, Philip C. (45)
324 Hope St., Glenbrook, Conn.
Vars, Clarence A. (29)
8-10 High St., Westerly, R. I.
Varvas, Anna M. (43)
20 Ethel Ave., Peabody, Mass.
Varzhabedian, Berj M. (49)
6335 N. Sacramento Ave., Chicago 45, Ill.
Vaselacopoulos, Steve G. (49)
14 Everett St., Springfield 4, Mass.
Vasey, Edwin R. (49)
629 W. LaClede, Youngstown 7, Ohio.
Vasiliades, Angelo J. (46)
601 Broadway, Long Branch, N. J.
Vaughan, Joseph B. (44)
Cincinnati College of Pharmacy, Cincinnati 3, Ohio.
Vaughn, John (48)
2123 Gilbert Ave., Cincinnati 6, Ohio.
Vaughn, Mavis M. (46)
Harvey Ave., Picayune, Miss.
Vaupel, Vance V. (49)
840 Main, Klamath Falls, Oreg.
Vavra, Minerva (28)
1916 S. Racine Ave., Chicago 8, Ill.
Vavro, Ferdinand F. (48)
P. O. Box 682, Lyndora, Pa.
Vazquez, Dr. Jose (46)
Edificio Ermita, Dept. 6-B, Tacubaya, Mexico, D. F.
Velarde, A. E. (48)
1740 El Camino Real, Redwood City, Calif.
Velasquez, Joaquin, Jr. (46)
8721 Pritchard Pl., New Orleans, La.
Vellella, Louis G. (43)
McDowell at Tenth St., Phoenix, Ariz.
Veneri, Fiore J. (43)
1011 Grassmere Ave., Interlaken Estates, N. J.
Venino, Frank, Jr. (47)
66 Woodside Rd., Maplewood, N. J.
Ventolo, Gloria (45)
50 Irving St., Jersey City 7, N. J.
Ventura, Antonio S. (45)
699 Bedford St., Fall River, Mass.
Ventura, Dewey (48)
228 Clayton St., San Francisco 17, Calif.
Venuto, Dolly A. (47)
1512 Bethlehem Pike, Flourtown, Pa.
Verallis, George D. (49)
296 Hancock St., Springfield 5, Mass.
Verbofsky, H. (47)
5829 Pierce St., Pittsburgh 11, Pa.
Verdejo, Guillermo (46)
Cerona 8, Almeria, Spain.
Vere-Lopez, Ana Mercedes (49)
Aibonito 1458 Urb. Hip., Santurce, P. R.
Vergin, Virgil A. (48)
2633 Xerxes Ave., N., Minneapolis, Minn.
Verhulst, Henry L. (48)
311 Federal Bldg., San Pedro, Calif.
Vernon, Charles E. (47)
75 Broadway, Newark 4, N. J.
Versele, Charles P. (46)
61 Prescott Ave., Hawthorne, N. J.
Vetterick, Harry F. (47)
205 S. Sumner St., Creston, Iowa.
Veve, Miguel A. (19)
Munoz Rivera St. 54, Box #345, Fajardo, P. R.
Vezey, Stanley A. (48)
289 Carrollton St., Shreveport, La.
Vezina, R. J. (32)
809 Liberty St., Springfield, Mass.
Vickers, William R. (46)
942 E. Plum St., Jesup, Ga.
Victor, Michael J. (49)
140 Chancellor Ave., Newark 8, N. J.
Victor, S. G., Jr. (47)
1020 Bedford Ave., Brooklyn 5, N. Y.
Vie, John T. (48)
1404 Silver St., New Albany, Ind.
VIEHOEVER, ARNO (15)
8701 Riverview Road, S. E., Washington 20, D. C.
Viele, Cherie (46)
Harrison, Nebr.
Vigdor, Philip (46)
20 Farley Ave., Newark 8, N. J.
Vigliano, Mario F. (49)
3194 Bronxwood Ave., Bronx 67, N. Y.
Vignovich, Bertha (49)
2503 Mill St., Aliquippa, Pa.
Vilas, F. L. (46)
101 S. Pierre St., Pierre, S. Dak.
Villere, Henry (44)
1038 Esplanade St., New Orleans, La.
Vincent, Hugh C. (45)
Dept. 69, Abbott Laboratories, North Chicago, Ill.
Vincent, Paul R. (45)
9 Clark St., Easthampton, Mass.
Vinciguerra, Louis (47)
112 Maolis Ave., Bloomfield, N. J.
Vinoski, Florence (49)
P. O. Box 15, South Connellsville, Pa.
Virgona, John J. (47)
7300 Bergenline Ave., North Bergen, N. J.
Vis, John (41)
23001 John R. St., Hazel Park, Mich.
Visor, Frederick C. (44)
1226 Hellerman St., Philadelphia, Pa.
Vitale, Michael C. (47)
128 Ivy St., Newark, N. J.

Vlahakis, George J. (47)
2821 N. 47th St., Milwaukee 10, Wis.
Vlaholeas, Thanaso (49)
502 Washington St., Paducah, Ky.
Vlazny, John G. (46)
6011 S. Francisco, Chicago 29, Ill.
Vliet, Elmer B. (47)
401 Prospect Ave., Lake Bluff, Ill.
Voellinger, Carrie J. Alt (46)
2747 Atlantic Ave., Brooklyn 7, N. Y.
Vogel, Robert F. (45)
1352 Funston Ave., San Francisco, Calif.
Vogler, Herman A. (20)
6223 Delor St., St. Louis, Mo.
Vogt, Alan-Gordon C. (39)
500 Highland Ave., Ft. Washington, Pa.
Vogt, Eugene W. (49)
Ferriday, La.
Vogt, Jeanne (49)
1812 Rosedale, Houston, Tex.
Voige, John H., Jr. (47)
18 Lockwood Ave., Fort Thomas, Ky.
Voight, Alvin H., Jr. (41)
857-8th St., Boulder, Colo.
Voight, Forrest B., Jr. (47)
1023 Beechwood Dr., S. W., Roanoke, Va.
Voigt, John L. (46)
School of Pharmacy, Univ. of Mississippi, Oxford, Miss.
VOIGT, RALPH F. (43)
808 S. Wood St., Chicago 12, Ill.
Voiland, Clarence E. (46)
1705 N. 82nd St., Seattle 3, Wash.
Voirol, James R. (49)
Box 249, Monroeville, Ind.
VOISS, ARCADIUS (01)
Immelmann Str. 21, Bad Godesberg, Germany.
Vold, John H. (17)
314 Demers Ave., Grand Forks, N. Dak.
Volkel, Clarence H. (46)
2729 W. Devon Ave., Chicago 45, Ill.
Volkmann, Elmer O. (47)
1937 W. Vliet St., Milwaukee 5, Wis.
Volkmann, Robert C. (47)
370 W. Wisconsin Ave., Oconomowoc, Wis.
Volwiler, Ernest H. (30)
c/o Abbott Laboratories, North Chicago, Ill.
von Danden, Mr. R. Jean (49)
2616 W. Granville Ave., Chicago 45, Ill.
Vondracek, John W. (45)
4908 La Salle Ave., Baltimore 6, Md.
Von Ewegen, H. F. (44)
2701 E. Moorland, Toledo, Ohio.
von Rohr, Robert J. (49)
323-11th Ave., S. E., Minneapolis 14, Minn.
von Stanley, Eugene (38)
572 Brunswick Ave., Trenton 8, N. J.
Voorhees, Alston L. (46)
51 Main St., Netcong, N. J.
Vorhes, Jack L. (49)
290 Ido Ave., Akron, Ohio.
Voshall, Elmer C. (49)
Howe Rd., Strongsville, Ohio.
Voshell, William F. (48)
2202 Pelham Ave., Baltimore 13, Md.
Voss, Elbert (47)
1030 N. W. Ninth Terrace, Gainesville, Fla.
Voss, Paul R. (47)
229 S. 6th St., Muskogee, Okla.
Vossmeyer, Alexander H. (47)
301 S. Western Ave., Los Angeles 5, Calif.
Votteler, W. Oscar (37)
1582 Bardstown Rd., Louisville 5, Ky.
Vratny, Thomas J. (42)
1916 S. Racine Ave., Chicago, Ill.
Vullings, Henry F. (48)
1702½ N. 6th St., Wausau, Wis.
Vullings, Willard C. (46)
320 Scott St., Wausau, Wis.
Vurpillat, Joseph B. (49)
212 W. Park Dr., Huntington, Ind.

## W

Waarvik, Gerhard C. (44)
945 Jenifer St., Madison, Wis.
Waber, Bruce D. (49)
6319 Ranchito Ave., Van Nuys, Calif.
Wackerman, Frank J. (49)
517 Lemon Ave., Arcadia, Calif.
Wackstein, Morris (45)
605 W. 170th St., New York 32, N. Y.
Wade, Joseph B. (39)
Riesbeck Drug Co., 1068 Virginia Ave., Indianapolis, Ind.
Waddell, Bessie J. (47)
8466 Victoria Ave., South Gate, Calif.
Waddle, Allen L. (49)
Harrisburg, Ark.
Wadley, John E. (48)
3157 Vineville Ave., Macon, Ga.
Wagener, Virginia (45)
714 Jones, Sious City, Iowa.
Waggener, Hugh U. (42)
4645 E. 23rd Ave., Denver, Colo.
Waggoner, D. G. (46)
1320 Main St., Hattiesburg, Miss.
Waggoner, Harry R. (49)
2451 Berkley, Klamath Falls, Oreg.
Wagner, Charles W. (47)
189-04—64th Ave., Flushing, N. Y.
Wagner, James A. (46)
233 Main St., Winner, S. Dak.
Wagner, Leo J. (37)
3035 S. 4th St., Louisville, Ky.
Wagner, Lloyd E. (46)
Marion, S. Dak.
Wagner, Raphael H. (46)
400 W. Baltimore St., Baltimore 1, Md.
Wagner, Robert P. (49)
559 Campbell St., Sidney, Ohio.
Wahl, Clarence E. (48)
8033 Brooklyn, Kansas City 5, Mo.
WAHL, VICTOR H. (28)
Lake Park, Minn.
Waid, Francis R. (48)
502 W. Walnut, Lexington, Nebr.
Waidelich, B. H. (44)
3101 Cherry St., Toledo, Ohio.
Wainger, Alexander (43)
600 S. Broad, Elizabeth, N. J.
Wainscott, Harold C. (45)
400 E. Main, Medford, Oreg.
Waishwile, Stanley L. (48)
7758 S. Halsted St., Chicago 20, Ill.
Waite, Austin R. (45)
c/o Walding, Kinnan & Marvin Co., 332-334 Summit St., Toledo 3, Ohio.
Waite, Maurice W. (41)
7134 Germantown Ave., Philadelphia, Pa.
Waite, Noble J. (47)
616 Hartford, Huntington Beach, Calif.
Wajert, Agnes P. (45)
Johns Hopkins Hospital, Pharmacy Dept., Baltimore 5, Md.
Wajert, John C. (46)
16 W. Long Ave., New Castle, Pa.
Wajert, Theresa F. (46)
21 W. Terrace Ave., New Castle, Pa.
Wakasa, Ben S. (47)
1211 Inyo St., Fresno, Calif.
Walchok, Jack (47)
945 N. 12th St., Milwaukee 3, Wis.
Wald, Edward C. (47)
932 Sutter Ave., Brooklyn, N. Y.
WALDON, CURTIS H. (42)
Montana State Univ., School of Pharmacy, Missoula, Mont.
Waldon, Wilburn C. (47)
1828 Norfolk St., Indianapolis 8, Ind.
Waldrup, T. C. (44)
Soso, Miss.
Wales, Horatio, Jr. (30)
Food & Drug Admin., Federal Security Agency, Washington, D. C.
Walgreen, C. R., Jr. (43)
4300 Peterson Ave., Chicago 30, Ill.
Waliga, John A. (49)
347 E. Tallmadge, Akron 10, Ohio.
Waligorski, H. S. (30)
19202 W. Warren Ave., Detroit, Mich.
Walker, Albert K. (46)
Sutton, W. Va.
Walker, Charles V. (48)
1508 N. 30th St., Omaha, Nebr.
Walker, Douglas V. (48)
1612 Park Ave., Racine, Wis.
Walker, Earle G. (47)
O'Reilly V. A. Hospital, Springfield, Mo.
Walker, Eleanor M. (45)
3460 N. Second St., Philadelphia 40, Pa.
Walker, George C. (49)
Ontario College of Pharmacy 46 Gerrard St., E., Toronto, Ontario, Canada.
Walker, John H. (47)
19 Trade, Greer, S. C.
Walker, I. N. (47)
c/o King Drug Co., Inc., 232 Wabash Ave., Terre Haute, Ind.
Walker, Myron L. (39)
17 S. Columbus Ave., Mount Vernon, N. Y.
Walker, R. C. (49)
104 N. 3rd, Ponca City, Okla.
Walker, Ralph J. (40)
2901 West Ave., Newport News, Va.
Walker, Ralph W. (44)
623 Brewer St., Hilton Village, Va.
Walker, Robert T. (45)
801 Bennie-Dillon Bldg., Nashville 3, Tenn.
Walker, Wayne R. (46)
921 W. Main St., Atlanta, Tex.
Walker, William W. (48)
335 E. Maple, Orange, Calif.
Walkingshaw, Robert, Jr. (47)
309 Walnut St., Sewickley, Pa.
Walkley, Berton B. (47)
400 Cedar, Seattle 1, Wash.
Wallace, Donald A. (45)
222 E. Superior St., Chicago 11, Ill.
Wallace, Robert T. (49)
1008 Fayette Ave., Springfield, Ill.
Wallace, Roy S. (32)
12 Washington Ave., Endicott, N. Y.
Wallace, Walter S. (46)
99-40—211th Pl., Queens Village, N. Y.
Wallace, William C. (48)
390 S. View Dr., Athens, Ga.
Wallace, William J. (49)
13314 Rochelle, Detroit 5, Mich.
Waller, Coy W. (43)
Lederle Laboratories, Inc., Pearl River, N. Y.
Waller, Herman S. (34)
32 W. Randolph St., Chicago, Ill.
Waller, William L. (49)
901 Washington Ave., Miami Beach, Fla.
Wallin, Ben L. (47)
Second St., Cumberland, Wis.
Wallis, Isadore (46)
37 S. Parker Ave., Atlantic City, N. J.
Walljasper, Aretas (48)
727 West Ave., S., LaCrosse, Wis
Walls, William H. (47)
Hodge's Drug Store, Marietta, Ga.
Walpole, Francis H. (47)
Box 1659, Sarasota, Fla.
Walsh, E. P. (47)
Horry Drug Co., Inc., Conway, S. C.
Walsh, Glenn F. (48)
507 Fourth East, McCook, Nebr.
Walsh, John H. (47)
5720 Rockhill Rd., Kansas City, Mo.
Walsh, Linnet M. (48)
1378 De Soto, Burlingame, Calif.
Walsh, Pauline E. (46)
897 S. 19th St., Newark 8, N. J.
Walsh, Philip S. (48)
1443 Norwood St., Chicago, Ill.
Walsh, Robert A. (44)
179 Longwood Ave., Boston, Mass.
Walt, Norman H. (47)
3649 E. 147th, Cleveland 20, Ohio.
Walter, Frank A. (44)
1802 W. Mistletoe Ave., San Antonio, Tex.
Walter, Henry (47)
1190 Lexington Ave., New York 28, N. Y.
Walter, Henry T. (46)
Sheridan, Mont.

Walter, Raymond E. (46)
1362 Elmwood Ave., Columbus 12, Ohio.
Walter, Severin J. (47)
5001 Cuming St., Omaha 3, Nebr.
Walter, William R. (49)
117 Arch Ave., Pittsburgh 2, Pa.
Walters, J. L. (47)
843 N. Euclid, Dayton 7, Ohio.
Walters, James E. (49)
97 E. 14th St., Columbus, Ohio.
Walters, Nelson P. (47)
215G S. Almansor St., Alhambra, Calif.
Walton, J. C. (44)
Ridge Ave., New Cumberland, W. Va.
Wander, George (29)
c/o Dr. A. Wander, S.A., Berne, Switzerland.
Wanek, Edward F. (46)
Neligh, Nebr.
Wang, Einar O. B. (40)
Cornell, Wis.
Wang, Su-Ming (48)
c/o Prof. K. H. Wang, Univ. Tai Wan, Tai Wan, China.
Wankovsky, Meyer (47)
2535 W. Devon Ave., Chicago 45, Ill.
Wannenwetch, J. F. (39)
4123 Frederick Ave., Baltimore 29, Md.
Waples, William E. (45)
3200 Guilford Ave., Baltimore 18, Md.
Warboys, W. R. (45)
2457 Seneca St., Buffalo 10, N. Y.
Warby, Peggy J. (44)
1306 Putnam, Detroit 2, Mich.
Ward, Elmer A. (45)
c/o Economy Drug Store, 1101 N. W. 3rd Ave., Miami 36, Fla.
Ward, Henley I. (47)
Wilson's Drug Co., Ellaville, Ga.
Ward, J. L., Jr. (44)
Box 392, Canton, N. C.
Ward, John E. (45)
Cleveland, Miss.
Ward, Justus C. (36)
Insecticide Division, Rm. 3937, S. Agriculture Bldg., Washington, D. C.
Ward, Maurice T. (46)
375 W. 19th St., Houston 8, Tex.
Ward, Miss Meredith K. (46)
318 Thomas St., Tuscaloosa, Ala.
Ward, Paul J. (47)
101 N. Court St., Ottumwa, Iowa.
Ward, Roy H. (46)
17 Washington St., Sequim, Wash.
Ward, Wilbur J. (46)
Cheshire, Ohio.
Warden, George G. (48)
1300 Broadway Burlingame, Calif.
Warden, Richard C. (42)
R. D. 1, Box 514, Akron 12, Ohio.
Wardlaw, Robert F., Jr. (47)
c/o Felker Apts., 400 S. Thornton, Dalton, Ga.
WARDLE, ARTHUR S. (10)
4 McKinstry Pl., Hudson, N. Y.
Ware, A. B. (44)
Ware's Pharmacy, Branford, Fla.
Ware, Palmer A. (49)
405 Holborn St., Bristol, Tenn.
Wargell, Walter F. (45)
2835 E. 132nd, Cleveland 20, Ohio.
Warhanik, Alvernon F. (47)
2159 Cermak Rd., Chicago 8, Ill.
Waring, Albert, Jr. (47)
Williams, Calif.
Warnack, Roy S. (31)
1000 S. LaBrea Ave., Los Angeles, Calif.
Warner, William D. (48)
80 W. Center St., Akron 8, Ohio.
Warnock, James (42)
4056 Balboa St., San Francisco, Calif.
Warren, Gerald (49)
2698 Coral Way, Miami, Fla.
Warren, James T. (48)
106 Emerson Dr., Sebring, Fla.
Warren, John R. (44)
582 W. Goodale St., Columbus 8, Ohio.
Warren, L. A. (44)
Garland, N. C.
WARREN, LEWIS E. (09)
2 Raymond St., Chevy Chase, Md.

Warren, Robert W. (48)
1771 Emerson Ave., S., Minneapolis 5, Minn.
Warren, Roy O. (49)
109 N. Berry, Lansing, Mich.
Wasbotten, Luther B. (44)
536 W. Wisconsin Ave., Milwaukee, Wis.
Washburn, Raymond L. (47)
615 Broadway, Hannibal, Mo.
Washko, Stephen R. (49)
1000 Somerset Ave., Windber, Pa.
Wsser, Samuel A. (49)
5801 Bryant St., Pittsburgh 6, Pa.
Wasserman, Herbert (46)
327 E. 13th St., New York 3, N. Y.
Wasserman, Milton J. (47)
318–6th Ave., Newark 7, N. J.
Wasserman, R. (49)
1245 Cambridge, Corpus Christi, Tex.
Wasserman, R. J. (49)
1500 Washington Ave., Miami Beach 39, Fla.
Wasson, John E. (38)
P. O. Box 656, St. John, N. B., Canada.
Waterman, Carroll G. (45)
306 Vernon, Oakland, Calif.
Waters, Betsy S. (49)
4141 Glenwick Lane, Dallas 5, Tex.
Waters, Goodsell F. (46)
492 Jackson Ave., Jersey City 4, N. J.
Waters, Kenneth L. (43)
Dean, School of Pharmacy, University of Georgia Athens, Ga.
Waters, Matthew T. (46)
55 Somerset St., Newark 3, N. J.
Wathan, James L. (49)
413 W. Main St., Morganfield, Ky.
Watkins, C. Earl (38)
3837 N. E. Union Ave., Portland 12, Oreg.
Watkins, Grover L. (48)
120 W. Chicago Rd., Sturgis, Mich.
Watkins, James E. (46)
1923 Rosewood Drive, Columbia 48, S. C.
Watman, George P. (41)
74 Richards Ave., Dover, N. J.
Watrous, Mary Frances (46)
2815 Midland St., Pittsburgh 26, Pa.
Watson, Daniel C. (46)
211 S. 100 E., St. George, Utah.
Watson, Don (49)
P. O. Box 116, Colquitt, Ga.
Watson, George D. (49)
1800 S. W. Third, Portland 1, Oreg.
Watson, Horald V. (47)
Hull, Tex.
Watson, James L. (49)
1358 Milwaukee Ave., Chicago, Ill.
Watson, John H., Jr. (49)
521 Townsend Court, Wilmington, Del.
Watson, John R. (47)
P. O. Box 332, San Francisco 1, Calif.
Watson, Kenneth E. (47)
622½ Park Ave., S. W., Fremont, Ohio.
Watson, L. W., Jr. (48)
P. O. Box 188, Marianna, Fla.
Watson, Robert N. (49)
Jonesboro Heights, Sanford, N. C.
Watson, Samuel A. (49)
12 Bridge St., South Hadley Falls, Mass.
Watson, Samuel D. (49)
c/o Watson's Drug Store, West Helena, Ark.
Watson, Wallace L. (47)
1800 S. W. Third, Portland 1, Oreg.
Watt, Lynn A. (28)
1724 S. Second St., St. Louis, Mo.
Watt, Val (47)
401 South Grand W., Springfield, Ill.
Watt, Walter H. K. (49)
901 N. 27th Ave., Omaha, Nebr.
Watt, Wilbert C. (49)
R. R. 8, Lafayette, Ind.
Wattenberger, Norton E. (48)
2061 Webster St., Palo Alto, Calif.
Watters, George J. (45)
1369 Washington, West Newton 65, Mass.

Watts, Edward C. (31)
St. Luke's Hospital, 421 W. 113th St., New York, N. Y.
Watts, Edward N. (47)
10528 Dupont, East Cleveland 8, Ohio.
Watts, Loyd H. (46)
Odebolt, Iowa.
Watts, Nellie P. (37)
744 University Park, N., Rochester 7, N. Y.
Waugh, Fred S. (49)
Sutherlin, Oregon.
Waxman, Philip H. (43)
945 Pine St., Apt. 6, San Francisco 2, Calif.
Way, E. Leong (43)
University of California, The Medical Center, San Francisco, Calif.
Way, H. M. (48)
1327 Magnolia, San Carlos, Calif.
Waylonis, Paul A. (46)
70 Halsey St., Newark 2, N. J.
Weatherwax, Allan G. (44)
4600 Francis St., Jackson, Mich.
Weaver, Albert L. (47)
3950A N. 20th St., St. Louis 7, Mo.
WEAVER, C. A. (09)
5101 Trumbull Ave., Detroit, Mich.
Weaver, David M. (48)
744 N. E. 2nd Ave., Miami 36, Fla.
Weaver, Eugene E. (46)
3733 Olive St., Kansas City 3, Mo.
Weaver, Eugene S. (43)
4820 Devonshire, Detroit 24, Mich.
Weaver, Jesse H. (47)
9951 TSU, SGO Det. 1, Percy Jones General Hospital, Battle Creek, Mich.
Weaver, Lawrence C. (47)
R. R. 3, Bloomfield, Iowa.
Weaver, Warren E. (49)
5305 Joan Lane, S. E., Washington 20, D. C.
WEBB, EDWARD N. (05)
30 Kenyon Brook Dr., Worthington, Ohio.
Webb, Harry C. (46)
401 W. 7th St., Wilmington, Del.
Webb, Joseph A. (47)
302 A St., South Norfolk 6, Va.
Webb, Otis C., Jr. (47)
2713 S. W. 9th St., Des Moines 15, Iowa.
Webb, Winton A. (39)
Box 1415, Balboa, Canal Zone.
Webb, W. W. (45)
Leslie Drug Co., Leslie, Ga.
Webb, W. W. (48)
F-1 Pendlton Homes, Macon, Ga.
Weber, Izador A. (45)
7531 Stony Island Ave., Chicago, Ill.
Webster, Donald F. (48)
2690 Santa Rosa, Altadena, Calif.
WEBSTER, GEORGE L. (28)
808 S. Wood St., Chicago 12, Ill.
Webster, John H. (41)
2900 Jefferson E., Detroit, Mich.
Webster, S. Earl (45)
24 Poplar St., Cambridge, Md.
Wecker, Elmore (47)
40—1st Ave., W., Dickinson, N. Dak.
Wedel, Milford N. (49)
433 S. Fountain, Wichita 8, Kans.
WEEKS, CARL (15)
Box 675, Des Moines, Iowa.
Weeks, James D. (48)
63 Heck Ave., Ocean Grove, N. J.
Weeks, James R. (41)
Dept. of Pharmacology, Univ. of Michigan, Ann Arbor, Mich.
Wegemer, Norbert (47)
Little Traverse Hospital, Petoskey, Mich.
Wehde, Albert C. (47)
1911 Forest St., Wauwatosa 13, Wis.
Weichelt, Frederick W. (41)
1153 E. Sylvan Ave., Milwaukee 11, Wis.
Weichmann, Lawrence R. (48)
188 Allen St., Chillicothe, Ohio.
Weidle, L. A., Sr. (39)
4500 Olive St., St. Louis, Mo.
Weidle, Leroy A., Jr. (44)
22 S. Central, St. Louis 5, Mo.
Weidner, Elmer M. (39)
Rexall Store, Morton, Pa.
Weigel, Joseph (47)
1232 Gilsey, Cincinnati 5, Ohio.

Weigle, George J. (47)
807 N. 21st St., Milwaukee 3, Wis.
Weil, Lillie V. (42)
502 N. Muscatel Ave., San Gabriel, Calif.
Weiman, Theodore (48)
2101 Van Ness Ave., San Francisco 9, Calif.
Weimer, Charles R. (48)
801 E. 7th St., Hopkinsville, Ky.
Wein, Alvin (46)
8401 W. Becher St., West Allis 14, Wis.
Weinberg, Herbert W. (48)
18-43—124th St., College Point, N. Y.
Weinberg, Irwin C. (47)
7333 Reading Rd., Cincinnati 16, Ohio.
Weinberger, Adolph (47)
2400 Superior Ave., Cleveland 14, Ohio.
Weinberger, August W. (45)
201 N. Main St., Charles City, Iowa.
Weiner, Carl (42)
4242 Edgehill Dr., Los Angeles, Calif.
Weiner, Sydney (49)
323½ N. Sierra Bonita, Los Angeles 36, Calif.
Weinick, Philip (46)
1201 Salem Ave., Hillside, N. J.
Weinke, Herman J. (49)
314 E. Monroe, South Bend, Ind.
Weinreb, Samuel A. (48)
4709 Bergenline Ave., Union City, N. J.
Weinstein, Alvin H. (49)
2117 Vermont, Toledo 2, Ohio.
Weinstein, Frank J. (49)
1200 Chestnut Ave., Trenton 10, N. J.
Weinstein, Herbert M. (48)
2142 College St., Jacksonville, Fla.
Weinstein, Oscar (46)
755 Lakeview Rd., #10, Cleveland 8, Ohio.
Weinstock, Ruth (45)
1621 Conlyn St., Philadelphia 41, Pa.
Weintraub, Florence (49)
2728 Webb Ave., New York 63, N. Y.
Weintraub, Joseph E. (47)
2728 Webb Ave., New York 63, N. Y.
Weintrob, Max M. (45)
412 Salem St., Medford 55, Mass.
Weintrub, Norbert (48)
3415 Reading Rd., Cincinnati 29, Ohio.
Weisberg, Abe (46)
699 Flushing Ave., Brooklyn 6, N. Y.
Weisel, John (41)
101-109 S. Monroe St., Monroe, Mich.
Weisler, Arnold (48)
1907 Loring Pl., Bronx 53, N. Y.
Weisman, Isadore (46)
105 Maple St., Bristol, Conn.
Weisman, Jacob (46)
631 N. Juanita Ave., Los Angeles 4, Calif.
Weismiller, Paul V. (32)
606 Ferndale Ave., Johnstown, Pa.
Weiss, Alfred (46)
746 Avenue A, Bayonne, N. J.
Weiss, Donald (48)
757 Canton St., Elizabeth 2, N. J.
Weiss, Eve (45)
66 Catalpa Ave., Perth Amboy, N. J.
Weiss, Garcon (46)
11711 Kinsman Rd., Cleveland 20, Ohio.
Weiss, Gustine P. (47)
4000 Iowa, St. Louis, Mo.
Weiss, Julian A. (49)
1651—35th Ave., San Francisco 22, Calif.
Weiss, Philip I. (47)
1617 Nelson Ave., Bronx, New York 53, N. Y.
Weiss, Saul S. (49)
N. W. 20th & Spruce Sts., Philadelphia 3, Pa.
Weissman, Bernard (48)
546 N. Hayworth Ave., Los Angeles 16, Calif.
Weissman, Herman (46)
961 Bergen St., Newark 8, N. J.
Weiter, Hans A. (49)
516 N. Chandler St., Topeka, Kans.
Welch, Cornelius C. (49)
4160 A, Aldine Ave., St. Louis 13, Mo.
Welch, Edward W. (47)
U. S. Naval Hospital, Building 82, U.S.N.T.C., Great Lakes, Ill.
Welch, Ernest C. (46)
3823 N. Rio Grande Blvd., Box 626, Albuquerque, N. Mex.
Welch, H. Leroy (47)
725 Main, Westbrook, Me.
Welch, J. T. (45)
525—10th Ave., San Francisco 18, Calif.
Welch, Thomas J. (45)
610 Eleanor Ave., Toledo 12, Ohio.
Welde, George F. (47)
208 Market St., Portsmouth, Ohio.
Welfare, Sam E. (44)
P. O. Box 428, Salem Sta., Winston-Salem, N. C.
Weller, Robert A. (46)
Parsons, Tenn.
Wellman, Carl L. (44)
480 N. Commercial, Salem, Oreg.
Wellman, Lyle H. (47)
2737—4th Ave., S., Seattle 4, Wash.
Wells, A.C. (46)
Munfordville, Ky.
Wells, Arthur F. (47)
Box 197, Greenville, Miss.
Wells, Ervin C. (44)
Sid Peterson Memorial Hosp. Pharmacy, Kerrville, Tex.
Wells, Eugene H. (45)
Winthrop-Stearns, Inc., Myerstown, Pa.
Wells, Frank R. (45)
127 E. Liberty St., Wooster, Ohio.
Welsch, Felix H. (45)
Lyndale Pharmacy, 2701 Peniston, New Orleans, La.
Welsh, Fred S. (49)
42 Cricket Ave., Ardmore, Pa.
Wendel, Dwight D. (45)
P. O. Box 3788, San Juan, Puerto Rico.
Wendle, Hervey M. (49)
909 Arch St., Williamsport 27, Pa.
Wengelewski, Carol (47)
5358 S. Spaulding, Chicago 32, Ill.
Wenstadt, Ernest P. (46)
Mosinee, Wis.
Wentworth, E. Wesley (49)
Thorne Ave., Lewiston, Me.
Wentz, Ruth H. (49)
51 Mountain Ave., Springfield, N. J.
Wenzel, Duane G. (47)
School of Pharmacy, University of Kansas, Lawrence, Kans.
Wenzler, Frederic J. (44)
Wayne & Barr Sts., Fort Wayne, Ind.
Werkheiser, Harold Edwin (20)
903 Bushkill St., Easton, Pa.
Werl, Frederick W. (49)
2757 Columbia Ave., Pittsburgh 21, Pa.
Werlin, Solomon (44)
103 First St., Troy, N. Y.
Werner, Charles (47)
48 Watson Ave., Newark 8, N. J.
Werner, Charles F. (34)
627 Main St., Tell City, Ind.
Werner, Elvia Z. (45)
1200 Pleasant St., Des Moines, Iowa.
Werner, Harold W. (29)
Wm. S. Merrell Co., Lockland Station, Cincinnati 15, Ohio.
Werner, Mary Barksdale (40)
General Delivery, T St. Sta., Washington, D. C.
Wernersbach, Mary (44)
1032 N. W. 14th Ter., Miami 36, Fla.
Wernicki, Sigmund J. (46)
385 Baldwin Ave., Jersey City, N. J.
Wernik, Abraham P. (43)
412 Main St., Metuchen, N. J.
Wertz, Daniel L. (42)
551 Main St., Johnstown, Pa.
Wertz, Harry E. (24)
Main & Clinton Sts., Johnstown, Pa.
Wesler, Marion (45)
505 South St., Batesville, Ind.
West, Charles C. (45)
Gallinger Hospital, Washington 3 D. C.
WEST, CHARLES E. (47)
2417 N. Central Ave., Knoxville 17, Tenn.
West, George L. (47)
825½ E. Drive, Oklahoma City 5, Okla.
West, Henry E. (46)
112 E. Main St., Sykesville, Pa.
West, Katherine P. (47)
c/o M. F. Collins Star Route, Three Mile Bay, Jefferson Co., N. Y.
Westerberg, Ernest R. (48)
904 E. 6th St., Tucson, Ariz.
Westerburg, George F. (49)
2709 Colcord Ave., Waco, Tex.
Westerman, Cecil (40)
1320 Austin Ave., Waco, Tex.
Westervelt, Vernon T. E. (46)
3808 N. Term St., Flint 6, Mich.
Westlake, L. D. (46)
1504 Hodiamont Ave., St. Louis 12, Mo.
Westlake, L. Frank (46)
1504 Hodiamont Ave., St. Louis 12, Mo.
Westlund, Joseph E. (47)
5901 Tower Ave., Superior, Wis.
WESTMORELAND, EDWIN R. (10)
Lockhart, Tex.
Westmoreland, W. D. (46)
Five Points, Kingsport, Tenn.
Westmoreland, William P. (49)
1121 Maple, Lockhart, Tex.
Wetmore, Anne E. (49)
3092 Maple Dr., N. E., Atlanta, Ga.
Wexler, Irving (46)
26 Fullerton Ave., Newburgh, N. Y.
Wexler, Judah (47)
47-21—41st St., Sunnyside, L. I., N. Y.
Whalen, George T. (49)
8652 N. W. 22nd Ave., Miami, Fla.
Whalen, Robert J. (49)
3311 Reid Ave., Lorain, Ohio.
Whayne, John M. (49)
Lepanto, Ark.
Wheeler, A. Alton (41)
21514 Grand Lake, St. Clair Shores, Mich.
Wheeler, A. H. (44)
75 Ocean St., South Portland, Me.
Wheeler, Arno (45)
261 Washington Ave., Grand Haven, Mich.
Wheeler, George N. (46)
2221 Crest St., Walters Hill Dr., Ashland, Ky.
Wheeler, Larry M. (41)
c/o Parke, Davis & Co., Jos. Compeau at the River, Detroit 32, Mich.
Wheeler, Lawrence L. (45)
820 S. Wenatchee Ave., Wenatchee, Wash.
Wheeler, Nancy W. (42)
50 E. Washington St., Chagrin Falls, Ohio.
Wheeler, W. M., Jr. (40)
3177 N. Pennsylvania, Indianapolis, Ind.
Wheelock, Richard B. (48)
1517—15th St., Moline, Ill.
Whelan, Walter P. (46)
N. E. Cor. 44th & Lancaster Ave., Philadelphia 4, Pa.
WHELPLEY, LAURA E. (27)
5530 Delmar Ave., St. Louis, Mo.
Whelton, William L. (46)
469 Wooster Ave., Akron 7, Ohio.
Whetsel, Howard B. (45)
230 N. La Salle St., Oak Ridge, Tenn.
Whidden, L. A. (49)
2615 Cornell, Orlando, Fla.
Whigham, Marshall W. (49)
1305 N. 12th Ave., Pensacola, Fla.
Whipple, Thomas A. (49)
2896 Forbes St., Jacksonville, Fla.
Whisenant, W. Chas. (49)
214 Pine, Central Point, Oreg.
Whitaker, Clinton C. (47)
Main & Wood Sts., Willits, Calif.
Whitaker, Lester S., Jr. (45)
980 1st St., Niles, Calif.
Whitaker, Robert M. (49)
409 S. Johnson St., Ada, Ohio.
Whitaker, Willis L. (47)
L. Box 117, Three Oaks, Mich.
Whitby, Herbert L. (48)
2314 Kootenai, Boise, Idaho.

White, Albert (46)
2473 Fulton St., Toledo 10, Ohio.
White, Alfred J. (44)
88-47—195th Pl., Hollis 7, Long Island, N. Y.
White, Allen I. (41)
School of Pharmacy, State College of Washington, Pullman, Wash.
White, C. C. (32)
c/o Ingram & Bell, Ltd., 256 McCaul St., Toronto, Ont., Canada.
White, Charles W. (43)
16 W. Blackwell St., Dover, N. J.
White, Charles W. (47)
43 Leon St., Rexall Drug Co., Boston, Mass.
White, Dan B. (47)
821 Carline Ave., Birmingham 8, Ala.
White, Edward C. (46)
52 Newark St., Hoboken, N. J.
White, Elizabeth S. (49)
2415 Garland Ave., Nashville 5, Tenn.
White, John F. (49)
421 Hart Rd., Lexington, Ky.
White, John K. (46)
1641 Wyandotte Rd., Columbus 8, Ohio.
White, Nathan (49)
36 Fessenden St., Mattapan 26, Mass.
White, Ralph M. (46)
P. O. Box 1801, Honolulu 6, Hawaii.
White, Ralph Pollock (22)
259 W. Federal St., Youngstown, Ohio.
White, Ralph W. (46)
c/o Admiral Way Pharmacy, 2358 California, Seattle, Wash.
White, Robert H. (49)
1016 S. Madison, Spokane, Wash.
White, T. M. (45)
Box 1828, Fresno 17, Calif.
White, Wallace F. (46)
Dept. of Pharmacognosy, Univ. of Minn. Coll. of Pharmacy, Minneapolis 14, Minn.
White, William R. (28)
1811 W. End Ave., Nashville, Tenn.
Whitehead, C. R. (40)
P. O. Box 158, Ramseur, N. C.
Whitehead, Doyce (45)
314 Main St., New Albany, Miss.
Whitehead, H. G. (43)
1201 E. Main St., Richmond, Va.
Whitehead, Jefferson D. (49)
Enfield, N. C.
Whitehill, Robert W. (46)
100 Morrison Ave., Punxsutawney, Pa.
Whitehouse, Eugene W. (46)
W. 1931 Pacific Ave., Spokane 9, Wash.
Whitfield, Kate M. (40)
426 E. 51st St., Chicago, Ill.
Whitfield, Robert S. (46)
Haverford Ave., R. R. 2, Nashville 9, Tenn.
Whitford, Cleo P. (46)
Washington Park, Washington, N. C.
Whitley, Clyde E. (47)
1362 E. Capitol St., Washington 3, D. C.
Whitley, John H. (49)
1130 Ford Ave., Tarrant 7, Ala.
Whitman, Lloyd M. (46)
2205 Shady Ave., Pittsburgh 17, Pa.
Whitmire, W. A., Jr. (48)
Box 15, Canton, Ga.
Whitmore, Jean (48)
Box 7, Lake Placid, Fla.
Whitmore, Joe W. (47)
1152 Christian Ave., Noblesville, Ind.
Whitmore, Wallace F. (47)
3910 Seminary Ave., Richmond 22, Va.
Whitney, D. V., Jr. (39)
Route 2, Box 257, Liberty, Mo.
Whitney, Guy V. (47)
1064 Gage St., Winnetka, Ill.
WHITNEY, HARVEY A. K. (25)
22458 Beech St., Dearborn, Mich.
Whitney, Louis J. (45)
379 Main St., Stoneham, Mass.
Whitson, William J. (39)
31 E. Main St., Phelps, N. Y.
Whittemore, Edwin (47)
3817 Belair Rd., Baltimore 13, Md.

Whitten, W. R. (46)
137 W. Vanderbilt, Corpus Christi, Tex.
Whittlesey, William H. (39)
7135 Wisconsin Ave., Bethesda, Md.
Whorton, Carl (40)
Box 246, Gadsden, Ala.
WHYTE, HILSON H. (20)
340 Roumfort Rd., Philadelphia, Pa.
Wiatrowski, Feliks L. (35)
807 W. Thomas St., South Bend, Ind.
Wicarius, Florian M. (47)
4900 W. 29th Pl., Cicero 50, Ill.
Wich, Carlton E. (28)
307 N. Ellwood Ave., Baltimore 24, Md.
WICH, HENRY E. (09)
1230 N. Stricker St., Baltimore, Md.
Wicker, Leslie J. (48)
2000 Vallejo St., San Francisco 23, Calif.
Wickham, Anthony E. (46)
300 S. Central Ave., Seaside Park, N. J.
Wickham, C. Miles (46)
Box 118, New Palestine, Ind.
Wicks, Jesse H. (47)
210 W. Main, Lewistown, Mont.
Wickwire, William De Mange (45)
2051-46th Ave., San Francisco 16, Calif.
Widmann, Lester F. (35)
201 W. Water St., Lock Haven, Pa.
Widule, Oscar C. (49)
130 Hudson St., Eau Claire, Wis.
Wiedmaier, Henry C. (46)
711 Carroll St., Brooklyn 15, N. Y.
Wiedmann, Patricia M. (48)
Box 13, Shafter, Calif.
Wiegand, Clyde (45)
113 Winthrop Pl., New Orleans 19, La.
Wiegman, Mary O. (45)
Route 19, Box 621, Indianapolis 44, Ind.
Wieland, Ralph E. (43)
2427 Durant Ave., Berkeley 4, Calif.
Wiener, Howard (47)
1613 Eastern Pkwy., Brooklyn 33, N. Y.
Wierbowski, Peter P. (46)
613 Spruce St., West Pittston, Pa.
Wiertelak, Albert P. (47)
4432 Archer Ave., Chicago 32, Ill.
Wiese, Gail A. (46)
114 Westlawn Park, Iowa City, Iowa.
Wiese, Mildred M. (49)
Route 11, Box 309-X, Indianapolis 44, Ind.
Wieseman, Paul Charles (44)
11 Conkey Ave., Norwich, N. Y.
Wiesen, George (46)
820 Linden Blvd., New York 3, N. Y.
Wiesenthal, Arthur H. (44)
1412 W. 61st St., Los Angeles 44, Calif.
Wiest, Harry Jones (27)
119 N. Keesey St., York, Pa.
Wiggin, Edward J. (49)
14424 Auburn, Detroit 23, Mich.
Wigley, Walter E. (48)
336 W. 66th St., Los Angeles 3, Calif.
Wilbur, Donald C. (48)
282 W. Britannia, Taunton, Mass.
Wilcox, George (47)
Hampshire, Ill.
Wilcox, John F. (45)
832 Washington St., Watertown, N. Y.
WILCOX, LEVI (03)
145 Woodlawn Ter., Waterbury, Conn.
Wilcox, P. W. (39)
c/o Sharp & Dohme, Inc., Glenolden, Pa.
Wilcox, W. D. (32)
600 S. Washington Sq., Philadelphia, Pa.
Wild, Harold A. (46)
110 N. Scott St., Joliet, Ill.
Wild, Herman R. (46)
200 Belford Ave., Huntington, W. Va.
Wilde, Fred E. (38)
910 W. Apple Tree Rd., Milwaukee 9, Wis.

Wildhack, Henry J. (39)
103 S. Main St., Newark, N. Y.
Wilear, Lynn (47)
326 Walworth Ave., Delavan, Wis.
Wiley, John C. (49)
2 S. Main, Miami, Okla.
Wilhelm, Leo M. (47)
123 Oakleigh Lane, Eugene, Oreg.
Wilke, Mary E. (46)
Security Laboratories, Burlington, Iowa.
Wilkes, Francis L. (47)
4910 N. E. 79th Ave., Portland 13, Oreg.
Wilkins, William J., Jr. (47)
1012 Broadway, Pitcairn, Pa.
Wilkinson, M. D. (49)
c/o Abbott Laboratories, P. O. Box 4394, Atlanta 2, Ga.
Willecke, Daryl W. (47)
1859 Fir, Salem, Oreg.
Willett, J. H. (44)
405 State St., Salem, Oreg.
Willey, Edward E. (47)
4521 E. Seminary Ave. Richmond 22, Va.
Willey, Paul E. (47)
3871-A Connecticut St., St. Louis 16, Mo.
Willhite, Aubrey F. (42)
2 W. State St., Redlands, Calif.
Williams, Bailey E., Jr. (47)
718 W. Locust, Johnson City, Tenn.
Williams, Charles B. (49)
882 N. 46th St., Philadelphia, Pa.
Williams, Charles L. (40)
Ohio State Univ., College of Pharmacy, Columbus 10, Ohio.
Williams, E. C. (47)
1609 W. Walnut, Blytheville, Ark.
Williams, Edith B. (44)
137 N. 25th, Lincoln, Nebr.
Williams, E. George (46)
2100 Ward St., Berkeley 5, Calif.
Williams, F. J. (48)
Bottineau, N. D.
Williams, Frank B. (47)
Flycreek, N. Y.
Williams, Fred L. (47)
Champlain College, Plattsburg, N. Y.
Williams, Harrison M. (46)
2227 Johnson St., N.E., Minneapolis 13, Minn.
Williams, John A. (49)
Lesbas, Ky.
Williams, John A. (46)
Pontotoc, Miss.
Williams, John P. (47)
1811 E. Main St., Humboldt, Tenn.
Williams, John R. (45)
528 N.E. 8th Ave., Ft. Lauderdale, Fla.
Williams, Laudon (47)
Montgomery Apothecary, Shepherd Bldg., Montgomery, Ala.
Williams, Laurel (47)
1225 Oakmont, Greensboro, N. C.
Williams, Murray Q. (44)
P. O. Box 372, Warrensburg, Mo.
Williams, O. H. (46)
387 Adams St., Plymouth, Mich.
Williams, Robert K. (49)
140 W. 9th St., Cincinnati 2, Ohio.
Williams, Robert S. (47)
Box 684, Orangeburg, S. C.
Williams, Robert W. (47)
Box 821, Clarksdale, Miss.
Williams, Roger H. (43)
850 Prince St., Teaneck, N. J.
Williams, Walter H., Sr. (49)
615 N. Monroe St., Tallahassee, Fla.
Williams, Walter R. (42)
219 Washington Ave., West Haven 16, Conn.
Williams, William H. (49)
7 W. Chicago, Coldwater, Mich.
Williams, William O. (48)
Dogwood Rd., Box 204, Baltimore 7, Md.
Williamson, Frank O. (49)
Newton D. Baker VA Hospital, Martinsburg, W. Va.
Williamson, J. W. (19)
108 S. Main St., Harrisonburg, Va.
Williamson, Milton P. (49)
812 Sixth St., N., Texas City, Tex.
Williamson, Robert E. (45)
Morocco, Ind.
Willingham, Carl (49)
4 Park Ave., New York 16, N. Y.

Willingham, William R. (49)
133 Dew St., Apt. 2, Prineville, Oreg.
Willis, Arnold A. (47)
16 N. 2nd St., Evansville, Wis.
Willis, Daniel C. (49)
410 N. Rossmore Ave., Apt. 107, Los Angeles 4, Calif.
Willis, Lloyd E. (49)
318 Summit, Richmond, Ky.
Willis, Lowell T. (46)
2222 Groff St., Indianapolis 22, Ind.
Willis, Oscar (47)
2218 E. Belleview Pl., Milwaukee 11, Wis.
Willis, Wade W. (47)
Monzingo-Willis-Dennis Drug Co., Magnolia, Ark.
Willits, Lyle W. (47)
2720 Verona Ter., Kansas City 2, Mo.
Willmon, Prince A. (46)
1112 Towson Ave., Ft. Smith, Ark.
Wills, Clifford P. (46)
832 Carlyle Pl., Indianapolis 1, Ind.
Wilson, F. E. (41)
Parke, Davis & Company, Detroit 32, Mich.
Wilson, Merton H. (45)
147 Dahill Rd., Brooklyn 18, N. Y.
Wilsey, L. Margaret (47)
53 W. Main, Johnsville, N. Y.
Wilson, Albert G. (46)
109 E. Broadway, Mayfield, Ky.
Wilson, Bliss C. (42)
Box #38, Pierre, S. Dak.
WILSON, CHARLES E. (21)
500 Waldron St., Corinth, Miss.
Wilson, Charles O. (36)
College of Pharmacy, University of Texas, Austin 5, Tex.
Wilson, Clarence B. (49)
2160 Forbes St., Jacksonville 4, Fla.
Wilson, D. H. (49)
Route 1, Box 73, Glendale, Ariz.
Wilson, Edwin E. (41)
3 Roycroft Rd., Peabody, Mass.
Wilson, Ernest L. (47)
c/o Shea Drug Co., Winchester, Ky.
Wilson, Eugene B. (47)
1815 S. Pershing, Lincoln 2, Nebr.
Wilson, Frank H. (49)
Genesee, Idaho.
Wilson, Frank L. (46)
21 Hatfield St., Caldwell, N. J.
Wilson, Fred (47)
200 E. Bridge St., (P.O. Box #88), Berea, Ohio.
Wilson, George H. (39)
St. Louis Medical Depot, St. Louis 2, Mo.
Wilson, Gordon C. (48)
760 W. 22nd Ave., Vancouver, B. C., Canada.
Wilson, Ivan T. (47)
Williams, Ariz.
Wilson, James E. (49)
7315 N. Fowler, Portland 17, Oreg.
Wilson, James H. (47)
14034 Van Nuys Blvd., Pacoima, Calif.
Wilson, James L. (47)
Clinic Pharmacy, Hearne, Tex.
Wilson, John I. (49)
416–18th St., S. E., Cedar Rapids, Iowa.
Wilson, L. A. (50)
6043 Perrier, New Orleans 18, La.
Wilson, Lucius L. (49)
5100 Charlotte Ave., Nashville 9, Tenn.
Wilson, Maurice (45)
Wilson Pharmacy, Audubon, Iowa.
Wilson, Polly S. (47)
756 Jefferson Ave., Memphis, Tenn.
Wilson, R. C. (30)
Box 608, Athens, Ga.
Wilson, Ralph M. (45)
Ferris Institute, College of Pharmacy, Big Rapids, Mich.
Wilson, Ray E. (49)
360 W. Leffelle, Salem, Oreg.
Wilson, Ray L. (47)
1122 W. Palm Lane, Phoenix, Ariz.
Wilson, Robert R. (46)
156 Granada Ave., Long Beach 3, Calif.
Wilson, Robert W., Jr. (43)
c/o Tec Chemical Corp., Manhattan & Pacific Sts., Stamford, Conn.
Wilson, Samuel E. (49)
1008 N. E. 18th, Oklahoma City, Okla.
Wilson, Stephen (25)
1431 Boulevard of the Allies, Pittsburgh, Pa.
Wilson, Theodore (48)
515 Fairhill Rd., Willow Grove, Pa.
Wilson, Thomas F. (47)
Russell, Ky.
Wilson, Thomas H. (46)
Route 3, Gastonia, N. C.
Wilson, Walter J. (24)
749–53 David Whitney Bldg., Detroit 26, Mich.
Wilson, William E. (49)
Harrodsburg Rd., R. R. 1, Lexington, Ky.
Wimberley, Wallis W. (49)
College of Pharmacy, Univ. of Nebraska, Lincoln, Nebr.
WIMMER, CURT P. (07)
115 W. 68th St., New York, N. Y.
Winand, John F. (49)
17 S. 4th St., Darby, Pa.
Windesheim, Jean G. (49)
622 N. Broad St., Lancaster, Ohio.
Winerman, Richard (46)
Main Ave., Stirling, N. J.
Wing, Horace O. (48)
20 Adele Court, San Francisco 11, Calif.
Wing, Lew S. (26)
625 E. 23rd St., Los Angeles 11 Calif.
Winkel, Stephen G. (47)
574 W. Arthur Ave., Milwaukee 7, Wis.
Winkel, Walter A. (47)
Tigerton, Wis.
Winkelmann, Chris. A. (48)
2800 Chippewa St., St. Louis 18, Mo.
Winkelmann, Herman P. (48)
6719 Leona, St. Louis 16, Mo.
Winkelmann, Margaret M. (47)
7227 Michigan Ave., St. Louis, Mo.
Winne, Arthur L. I. (20)
1103 E. Main St., Rm. 300, Richmond 19, Va.
Winston, Donald T. (45)
208–4th St., West Des Moines, Iowa.
Winston, Milton D. (46)
10010 S. Blvd., Cleveland 18, Ohio.
Winter, Clyde C., Jr. (47)
701 Forster St., Farmington, Mo.
Winton, Ira H. (47)
133 E. 58th St., New York 22, N. Y.
Wirkula, Robert W. (47)
4403–8th Ave., Brooklyn 20, N. Y.
Wirt, John E. (47)
245 Chestnut, Meadville, Pa.
WIRTH, ADAM (04)
5725 Louis XIV, New Orleans, La.
Wirth, Henry E. (47)
3607 N. Green Bay Ave., Milwaukee 12, Wis.
Wise, A. W. (49)
Jasper, Fla.
Wise, Harold L. (45)
2020 Clark Ave., Long Beach 4, Calif.
Wise, M. H. (35)
3067 St. George St., Los Angeles, Calif.
Wise, Maxim S. (47)
1454 Walton Ave., Bronx 52, N. Y.
Wiseman, A. E. (40)
29 Birdseye Glen, Verona, N. J.
Wiseman, Emmett O. (46)
Fayetteville, W. Va.
Witherspoon, Alex C. (49)
810 S. W. Washington St., Portland 5, Oreg.
Withycombe, H. (47)
Eureka, Mont.
Witlin, Bernard, Dr. (43)
6335 N. Broad St., Philadelphia 41, Pa.
Witman, Bernard W. (45)
272 Westwood Ave., Long Branch, N. J.
Witt, Emery (46)
276 Meeker Ave., Newark, N. J.
Witte, William A. (46)
206 Jefferson, Burlington, Iowa.
Wittenberg, Earl F. (48)
8102 Noble Ave., Van Nuys, Calif.
Wittenberg, Vera (47)
5925 S. Racine Ave., Chicago 36, Ill.
Woelffer, Royal W., Jr. (47)
Monticello, Wis.
Wohlwend, Clarence J. (46)
7813 Kenridge Lane, Webster Groves 19, Mo.
Wojcik, Albert F. (48)
Route 4, Box 714, Morgantown, W. Va.
Wojcik, Henry (42)
3287 Yemans, Hamtramck 12, Mich.
Wojcik, Joseph H. (47)
1827 W. Hayes Ave., Milwaukee 7, Wis.
WOJTALEWICZ, PHIL LEO (25)
2928 N. Linder Ave., Chicago 41, Ill.
Wold, Guy K. (46)
310 S. Chatham, Austin, Minn.
Wold, L. A. (48)
95 Stuyvesant Ave., Lyndhurst, N. J.
Woldman, Joseph H. (47)
23 Lovering Ave., Buffalo 16, N. Y.
Wolf, G. Ernest (33)
6901 Belair Rd., Overlea 6, Md.
Wolf, Gerard J. (47)
1232 Goe Ave., Pittsburgh 12, Pa.
WOLF, NATALIE K. (44)
805 Linwood Ave., Valparaiso, Ind.
Wolfe, Bogdan V. (46)
829 Third Ave., New Brighton, Pa.
Wolfe, Cecil D. (43)
3024 Western Ave., Peoria, Ill.
Wolfe, Charles R. (48)
2402 Coleston Dr., Apt. 103, Silver Springs, Md.
Wolfe, Douglas W. (46)
204 Souza St., Guadalupe, Calif.
Wolfe, Eddie (46)
Mt. Alto Veteran's Hospital 2650 Wisconsin Ave., N. W., Washington 7, D. C.
Wolfe, Elwood K., Jr. (48)
R. F. D., Hatfield, Pa.
Wolfe, Haynes G. (46)
35–16—76th St., Jackson Heights, L. I., N. Y.
Wolfe, Joseph A. (43)
85 Oxford Pl., Staten Island 1, N. Y.
Wolfe, Lee W. (40)
440 Walnut St., Reading, Pa.
Wolfe, Marie L. (46)
Ideal Pharmacy, Madisonville, La.
Wolfe, Willis E. (44)
Wolfe's Pharmacy, Baltimore, Ohio.
Wolfer, George B. (47)
14833 E. Jefferson, Detroit 15, Mich.
Wolff, Daniel O. (36)
44 Bellevue Ave., Melrose, Mass.
Wolff, Helen H. (44)
528 N. Gilbert St., Iowa City, Iowa.
Wolff, J. Edward (46)
137 N. Llanwellyn, Glenolden, Pa.
Wolfgang, Edward J. (44)
Protestant Deaconess Hospital, Evansville, Ind.
Wolford, Bernard R. (47)
Claflin, Kans.
Wolfred, Morris (41)
4263 Vinton Ave., Culver City, Calif.
Wolfson, Harold (47)
20 Sobel Ct., Fox Hills, Stapleton, N. Y.
Wolfson, Harvey S. (48)
45 W. 81st St., New York 24, N. Y.
Wolfson, Sidney B. (46)
188 Congress Ave., Chelsea 50, Mass.
Wolfthal, Abraham (49)
2325 W. Magnolia, Fort Worth, Tex.
Wolinsky, George (46)
43 Depot St., Greensburgh, Pa.
Wolk, Frank (47)
520 Crown St., Brooklyn 13, N. Y.
Wolkoff, Paul (49)
48 Farrington St., Newburgh, N. Y.
Wolman, Morton (44)
6065 Gladden Dr., Indianapolis 20, Ind.
Wolman, Walter (49)
American Med. Ass'n., 535 N. Dearborn, Chicago 10, Ill.
Wolper, William (47)
1 Ridge Rd., North Arlington, N. J.
Wolsky, George H. (47)
926 E. 180th St., Bronx 60, N. Y.

Wolter, William B. (48)
1010 Cross Lane, Cincinnati 6, Ohio.
Wong, Edward P. (41)
134 N. E. 6 Ave., Portland 14, Oreg.
Wong, Orpha L. (44)
P. O. Box 26, Wailuku, Maui, Hawaii.
Wong, Stanley (47)
229—9th St., Oakland 7, Calif.
Wong, William J. (47)
173 Canal St., New York 13, N. Y.
Wood, C. Kenneth (46)
808 S. Main St., Hopkinsville, Ky.
Wood, Donald J. (49)
748 West Dryden St., Glendale 2, Calif.
Wood, Frank P. (49)
1302 King's Rd., Jacksonville 4, Fla.
Wood, Henry W. (45)
2400 Warrior Rd., Birmingham, Ala.
WOOD, HORATIO C., JR. (06)
319 S. 41st St., Philadelphia, Pa.
Wood, James A. (49)
505 E. Eldridge Ave., Flint 5, Mich.
Wood, James B. (48)
5008—17th, N. E., Seattle 5, Wash.
Wood, Karl (46)
506 Exchange Bldg., Memphis 3, Tenn.
Wood, Kenneth M. (46)
2747 Withrop Ave., Indianapolis, Ind.
Wood, Medford C. (48)
6112 Sefton Ave., Baltimore 14, Md.
Wood, Philip N. (48)
35 Bowden St., Douglasville, Ga.
Wood, Thomas (46)
1245 Waterman Ave., Detroit 9, Mich.
Wood, Warner T. (40)
Avon & Monticello Rd., Charlottesville, Va.
Woodall, William W. (46)
7552 Alicia Ave., St. Louis County 17, Mo.
Woodard, Earl J. (48)
Box 103, Rentz, Ga.
Wooden, Earl (43)
Reedley, Calif.
Woodford, Kenneth (48)
238 Pennsylvania Ave., McDonald, Ohio.
Woodhams, John C. (48)
701 S. Corona St., Denver 9, Colo.
Woods, Esli L. (26)
Dept. of Pharmacy, Univ. of British Columbia, Vancouver, B. C., Canada.
Woods, Frederick H. (43)
3rd and Center Sts., Pitcairn, Pa.
WOODS, WILLIAM E. (43)
P. O. Box 411, Indianapolis, Ind.
Woodson, Eugene L. (46)
6331 Burbridge St., Philadelphia 44, Pa.
Woodward, Edson F. (47)
S. B. Penick Co., 50 Church St., New York 7, N. Y.
Woodward, Ethel I. (40)
614 Linwood Ave., Buffalo 9, N. Y.
Woodward, Ruth A. (47)
3415 S. W. 11th Ave., Portland 1, Oreg.
Woolard, Edward W. (46)
134 S. Garnett St., Henderson, N. C.
Woollard, Mervyn J. (48)
High St., Oatslands, Tasmania, Australia.
Worden, Lloyd G. (48)
1520 Ralworth Rd., Baltimore 12, Md.
Worm, Gordon A. (47)
65 E. Division, Fond duLac, Wis.
Worner, Wm. A. (48)
705 Canal, New Orleans 16, La.
Worrell, Lee Frank (43)
Univ. of Mich., College of Pharmacy, Ann Arbor, Mich.
Worster, James O. (46)
1101 N. Myrtle Rd., South Bend 19, Ind.
WORTHINGTON, J. W. W. (12)
123 Harrison Ave., Glenside, Pa.
Wortmann, Sidney H. W. (39)
7416 Augusta Ave., Normandy 21, Mo.
Worton, Albert G. (39)
582 W. Goodale St., Columbus, Ohio.
Wotherspoon, Robert (45)
c/o Orbis Products Corp., 55 Virginia St., Newark 5, N. J.
Woychik, Roman J. (47)
Arcadia, Wis.
Wray, Louise (47)
Royston, Ga.
Wright, C. D. (49)
Albertville, Ala.
Wright, C. L. (46)
6326 Neff Rd., Detroit 24, Mich.
Wright, Clifford B. (43)
3129 Cudahy St., Huntington Pk., Calif.
Wright, George A. (47)
1114 N. Marshall, Apt. 208, Milwaukee 2, Wis.
Wright, Herbert G. (45)
Crouse Irving Hospital, 820 S. Crouse Ave., Syracuse, N. Y.
Wright, Howard L., Jr. (45)
Statler Pharmacy, 81 W. Genesee St., Buffalo, N. Y.
Wright, James L. (46)
3716 North Linn, Oklahoma City, Okla.
Wright, Joe V. (46)
1316 W. Commerce St., Dallas, Tex.
Wright, John H. (37)
1226 Drew St., Clearwater, Fla.
Wright, John S. (16)
4411 Washington Blvd., Indianapolis, Ind.
Wright, Maurice G. (46)
1042 W. Rosemont Ave., Chicago 40, Ill.
Wright, Myron J. (49)
1905 Lang St., Cincinnati 10, Ohio.
Wright, Robert R. (45)
Box 76, Deerfield Beach, Fla.
Wright, Thomas G. (48)
1215 Linden Lane, Silver Spring, Md.
Wright, William C. (46)
Box 1654, Beaumont, Tex.
Wright, William R. (49)
1438 South 25th St., Terre Haute, Ind.
Wright, William W. (49)
Heflin, Ala.
Wrobel, Morris (48)
4154 Motor Ave., Culver City, Calif.
Wruble, Milton (49)
1702 Grove St., Kalamazoo 50, Mich.
Wuggatzer, Walter L. (46)
250 Williams Ave., Hasbrouck Heights, N. J.
Wunsch, John (47)
1257 Granville Ave., Chicago 40, Ill.
WURDACK, J. H. (09)
312 McKinley St., Pittsburgh 10, Pa.
Wurdack, Paul J. (46)
312 McKinley St., Pittsburgh 10, Pa.
Wurster, Dale E. (45)
913 University Ave., Madison 5, Wis.
Wurtz, Harry A. (48)
1303 S. 18th Ave., Yakima, Wash.
Wyatt, Donald L. (47)
3530 Bainbridge Rd., Cleveland Heights 18, Ohio.
Wyatt, Thomas D. (46)
P. O. Box 1563, Spartanburg, S. C.
Wyble, John M. (46)
200 Warren Ave., Apollo, Pa.
Wydrzynski, Edmund Wm. (45)
2552 E. Ontario St., Philadelphia 34, Pa.
Wylie, A. L. (47)
c/o Key Drug Co., 434 E. Capitol St., Jackson, Miss.
Wynne, Jesse W. (45)
109 S. 2nd St., P. O. Box 116, Memphis 1, Tenn.
Wyss, Arthur P. (36)
c/o Donald S. Wyss, 3890 E. Delhi Rd., R. R. 1, Ann Arbor, Mich.

## Y

Yablonicky, Joseph M. (48)
1368 Boston Ave., Bridgeport 8, Conn.
YaDeau, G. J. (46)
329 Broad Ave., Palisades Park, N. J.
YaDeau, William E. (49)
c/o Hudson Pharmacal Co., 4411 Park Ave., Union City, N. J.
Yaffa, Frederick (46)
89 Henry St., Brooklyn 2, N. Y.
Yaguda, Frank A. (49)
1948 Boulevard, Hollywood, Fla.
Yakima, Henry J. (49)
6135 Kenilworth, Dearborn, Mich.
Yakubik, John (45)
739 King George Rd., Fords, N. J.
Yakubik, Joseph (46)
739 King George Rd., Fords, N. J.
Yalan, Alexander (49)
70 Dahill Rd., Brooklyn, N. Y.
Yalon, Jerome M. (47)
1850—22nd Ave., San Francisco, 22, Calif.
Yalowich, Charles (25)
390 Joseph Ave., Rochester, N. Y.
Yamada, Calvin H. (46)
722 Parnassus Ave., San Francisco 22, Calif.
Yanda, H. W. (49)
1 Park Ave., Castle Shannon, Pa.
Yanda, Rudolph L., Jr. (37)
57 Crafton Ave., Crafton, Pa.
Yankeloff, Louis G. (46)
1801-03 E. Eager St., Baltimore 5, Md.
Yankley, Anthony (48)
12502 Fairport, Detroit 5, Mich.
Yant, Zelba (46)
313 McKinley Ave., Pomona, Calif.
Yanuzzi, Adolph (47)
34 Nassau St., Newark, N. J.
Yarbrough, Charles H. (45)
22 N. Ridgewood Dr., Sebring, Fla.
Yargates, Michael (46)
14301 Mansfield, Detroit 27, Mich.
Yarnell, David T. (44)
41 Greenwood Ave., Toledo, Ohio.
Yates, S. Blake (46)
405 Lexington Ave., New York 17, N. Y.
Yates, W. B. (44)
1431 Chestnut, Kenova, W. Va.
Yatsu, Koro (48)
1138 E. 123rd St., Cleveland 8, Ohio.
Yawitz, Leo (46)
1214 Avenue K, Brooklyn 30, N. Y.
Yeager, Harry W. (47)
2202 Spring St., Pittsburgh 10, Pa.
Yeager, Howard E. (49)
503 Lamont Ave., San Antonio 9, Tex.
Yeager, Robert N. (44)
133 Saranac Ave., Buffalo 16, N. Y.
Yeargan, Reagan L. (46)
Harriman, Tenn.
Yeo, Ernest E. (49)
460 Portland Ave., Gladstone, Oreg.
Yesk, Arthur J. (46)
8 Dunster Rd., Great Neck, N. Y.
Yocum, Robert E. (47)
4701 E. Washington St., Indianapolis 1, Ind.
Yohe, George O. (46)
4024 Fifth Ave., Pittsburgh 13, Pa.
Yoke, Mary A. (48)
Box 196, Deer Park, Wash.
Yoneji, Mitsuso (47)
417A Ft. Des Moines Housing Proj., Des Moines 15, Iowa.
York, A. B. (48)
2617 Highland Ave., Birmingham 5, Ala.
Yoshimura, Frank (44)
252 S. 13th E., Salt Lake City, Utah.
Yoss, Eugene J. (46)
1895 Andrews Ave., New York 53, N. Y.
Yothers, Chester D. (45)
410 Brostol Blvd., San Leandro, Calif.
Young, Charles L. (48)
214 Montrose Ave., Catonsville 28, Md.
Young, Charles W. (49)
1531 Blanding St., Columbia, S. C.
Young, Daniel W. (46)
221 E. Third St., Pine Bluff, Ark.
Young, Edward (46)
312 S. First Ave., Wausau, Wis.

Young, George I., Jr. (43)
1511 Pentridge Rd., Apt. 264, Baltimore 12, Md.
YOUNG, GEORGE O. (08)
Buckhannon, W. Va.
Young, George W. (46)
1515–28th St., Rock Island, Ill.
Young, Gilbert (46)
c/o Young Drug Co., Portland, Tenn.
Young, Harold F. (47)
1832 S. Millwood, Wichita 12, Kans.
Young, James G. (47)
Pharmacy School, Univ. of North Carolina, Chapel Hill, N. C.
Young, John C. (48)
605 Henry Ave., Wellesville, Ohio.
Young, John D. (47)
19 Parkview Rd., West Hartford, Conn.
Young, Oliver W. (46)
C. L. Muggah & Co., 1 W. Spring St., Chippewa Falls, Wis.
Young, Patricia R. (48)
414 S. 48th St., Philadelphia 43, Pa.
Young, Paul R. (40)
Rm. 221-A, Bldg. 62, U. S. Naval Training Center, Great Lakes, Ill.
Young, Ralph (48)
854 S. Orange Dr., Los Angeles 36, Calif.
Young, Richard D. (46)
R. F. D., Lodi, Calif.
Young, W. C. (46)
512 Franklin Ave., Aliquippa, Pa.
Young, William W. (46)
2955 Clay St., San Francisco, Calif.
Young, William W. (45)
2 W. Main St., Cartersville, Ga.
Younger, Arthur V. (46)
Doylestown, R. D. 1, New Galena, Pa.
YOUNGKEN, HEBER W. (12)
179 Longwood Ave., Boston, Mass.
Youngken, Heber W., Jr. (42)
Univ. of Washington, College of Pharmacy, Seattle, Wash.
Youngs, Merle L. (48)
145 Hudson St., New York 13, N. Y.
Yount, Wallace A. (46)
4600 San Fernando Rd., Glendale 4, Calif.
Yovaish, Geraldine I. (48)
327 S. Main, Rockford, Ill.
Yunger, Ladimer (44)
13213 Bartlett Ave., Cleveland 20, Ohio.
Yuresko, John (47)
Mt. Hope Rd., Rockaway, N. J.
Yuschik, Walter (49)
1034 Amboy Ave., Fords, N. J.

## Z

Zadina, Rudolf (46)
na rybnicku 14, Prague II, Czechoslovakia.
Zafran, Stanley G. (48)
2815 W. Lehigh Ave., Philadelphia 32, Pa.
Zagelow, Leonard P. (39)
5441 ASU ROTC Detachment, University of Minnesota, Minneapolis, Minn.
Zager, George R. (49)
9 Maplewood Ave., Gloucester, Mass.
Zahalan, Francis (48)
66 Dorchester St. E., Montreal, P. Q., Canada.
Zaharia, Jack (47)
135-14 225 St., Laurelton, L. I., N. Y.
Zahn, Herman (45)
1322 Summit Ave., Union City, N. J.
Zahn, Peter E. (47)
13 Trinity Pl., New York 6, N. Y.
Zahradka, John F. (47)
207 W. Second, Pana, Ill.
Zahray, Charles W. (47)
7400 Broadway, North Bergen, N. J.
Zajac, John B. (41)
225 George St., New Brunswick, N. J.
Zake, Harry (48)
905 Lakeview Rd., Cleveland 1, Ohio.
Zaleski, Rufin H. (47)
7554 S. Halsted St., Chicago 20, Ill.
Zalevsky, Sam (32)
5658 Northumberland St., Pittsburgh 17, Pa.
Zamat, Milton (48)
837—18th Ave., Irvington 11, N. J.
Zampella, Nunzi J. (47)
218 South St., Jersey City 7, N. J.
Zang, Otto J. (46)
105 S. Main St., Taylor, Pa.
Zapotocky, Joseph A. (48)
1818 Plainview Ave., Pittsburgh 26, Pa.
Zappa, Victor B. (49)
72 Oak St., Lynbrook, N. Y.
Zappasodi, Silvia G. (45)
1901 S. 18th St., Philadelphia 45, Pa.
Zappia, Joseph F. (47)
1505 Roosevelt Ave., Indianapolis, 1, Ind.
Zareiko, J. S. (49)
235 Columbia Rd., Dorchester 21, Mass.
Zaremba, C. Paul (46)
645 E. Washington St., New Castle, Pa.
Zarr, George F. (45)
Water St., Hulmeville, Pa.
Zarrow, Arthur T. (45)
2164 Prospect Ave., New York 57, N. Y.
Zastera, B. R. (47)
Syracuse, Nebr.
Zastera, Joseph F., Jr. (49)
Louisville, Nebr.
Zaucha, Frank L. (46)
314 S. Spaulding Ave., Chicago 24, Ill.
Zavala, R. J. (45)
Box 1748, Ponce, Puerto Rico.
Zawadzki, M. C. (45)
179 Lake Shore Drive E., Dunkirk, N. Y.
Zdawczynski, Edward (45)
203 Main, T/A Main Pharmacy, Boonton, N. J.
Zehenni, Eli (44)
5012 Ebersole, Cincinnati 27, Ohio.
Zeiger, Simon L. (47)
Veterans Administration, Waukesha, Wis.
Zeigler, Mary A. (46)
107 E. Dunedin, Columbus 2, Ohio.
Zeisig, Harry C. (46)
R. D. 2, Milford, Del.
Zeldin, Ben (49)
43-10—44th St., Sunnyside, Long Island City, N. Y.
Zell, Bernard (46)
164 E. Maynard Ave., Columbus 2, Ohio.
Zell, Sol D. (46)
289 E. State St., Columbus 15, Ohio.
Zeller, Edward J. (48)
622 Holgate Ave., Defiance, Ohio.
Zengotita, Flor A. (48)
Box 863, Rio Piedras, Puerto Rico.
Zerbe, Bernard (48)
1193 Warburton Ave., Yonkers, N. Y.
Zerewat, Olga D. (46)
78 Drexelbrook Dr., Apt. 4, Drexel Hill, Pa.
Zern, Mark A. (47)
176 S. 1st St., Lehighton, Pa.
Zervitz, Max M. (48)
3819 Menlo Dr., Baltimore 15, Md.
Zickes, Paul F. (44)
3894 W. 135th St., Cleveland, Ohio.
Ziebarth, John E. (39)
8100 W. National Ave., West Allis, Wis.
ZIEFLE, ADOLPH (10)
3009 Van Buren St., Corvallis, Oreg.
Ziegler, Bernice (47)
677 Parsons Ave., Columbus 6, Ohio.
Ziegler, Frieda J. (45)
6150 Oakland St., St. Louis 10, Mo.
Zielinski, Casimir A. (46)
709 N. Water St., Milwaukee 2, Wis.
Zielinski, Walter E., II (48)
428 Benzinger St., Buffalo, N. Y.
Ziemlak, Leo W. (49)
Mellon Institute, Pittsburgh 13, Pa.
Zienty, Ferdinand B. (36)
8736 Radley Ave., Brentwood 17, Mo.
Ziff, Charles B. (48)
305 Blvd., Hasbrouck Heights, N. J.
Zijp, Klaas (46)
Bloemendaalschestraat Weg 145, Santpoort, Holland.
Zilber, S. Nathan (47)
2213 Wisconsin Ave., Washington 7, D. C.
Zimdahl, A. F. (44)
2646 Main St., Buffalo 14, N. Y.
Zimmelman, Stanford (45)
6217 W. 5th St., Los Angeles 36, Calif.
Zimmer, Arno W., Jr. (46)
Main St., Waterford, Wis.
Zimmer, Arthur J. (47)
10038 Sheldon Dr., St. Louis 15, Mo.
Zimmer, Howard (49)
Sherwood, Oreg.
Zimmer, William H. (48)
2612 S. 69th St., Milwaukee 14, Wis.
Zimmerman, D. R. (45)
1027 Chulta Vista Ave., Burlingame, Calif.
Zimmerman, James A. (46)
279th General Hospital, Denver 8, Pa.
Zimmerman, Martin F. W. (46)
441 W. Brackenridge St., Fort Wayne 2, Ind.
Zimmerman, Russel A. (44)
16036 Harper Ave., Detroit 24, Mich.
Zimmerman, Walter R. (41)
909 Elm St., Youngstown, Ohio.
Zimskind, Paul G. (47)
498 Centre St., Trenton 10, N. J.
ZINSSER, JOHN S. (45)
P. O. Box 7259, Philadelphia 1, Pa.
Zirkle, Mildred S. (48)
935 S. St. Bernard St., Philadelphia, Pa.
Zitlin, Irving P. (47)
1504–8th St., Wausau, Wis.
Zitomer, Bernard M. (46)
2970 Ocean Ave., Brooklyn, N. Y.
Zitomer, Jack (47)
5302–15th Ave., Brooklyn 19, N. Y.
Zive, Simon (46)
4222 Third Ave., New York 57, N. Y.
Zlatunich, Steven John (42)
100 B St., San Mateo, Calif.
Zlinkoff, Sergei S. (49)
43 W. 16th St., New York 11, N. Y.
Zmudzinski, Eleanor (42)
4386 Neville Rd., South Euclid, Ohio.
Zocklein, Otto L. (46)
1 Mt. Pleasant Ave., Rockaway, N. J.
Zolenas, Anthony J., Jr. (47)
Apt. 1, Main Dr., Army Medical Center, Washington 12, D. C.
Zopf, Louis C. (34)
College of Pharmacy, State Univ. of Iowa, Iowa City, Iowa.
Zorilla, Ruth D. (43)
120 Lawrence Ave., Hasbrouck Heights, N. J.
Zorn, Henrietta M. (45)
2028 Hanover Dr., East Cleveland 12, Ohio.
Zorn, Howard H. (46)
c/o Zorn's Drug Store, Cor. Lincoln & Edwards Sts., Springfield, Ill.
Zuck, Frank J. (47)
308 N. Wyman St., Rockford, Ill.
Zugich, John J. (41)
800 Howard, New Haven, Conn.
Zuick, Ernest R. (40)
286 E. Kingman Ave., San Bernardino, Calif.
Zupic, Joseph J. (49)
397–15th St., N. W., Barberton, Ohio.
Zupko, Arthur George (46)
St. Louis College of Pharmacy, St. Louis, Mo.
Zwick, Karl G. (23)
3444 Cornell Pl., Cincinnati 20, Ohio.
Zwisler, Charles F. (45)
4329 Coolidge Ave., Minneapolis 16, Minn.

# 1950

# Mid Century Convention

# Hotel Traymore

# Atlantic City, New Jersey

# April 30 to May 6

## *SEND TITLES OF PAPERS FOR SECTION MEETINGS NOW*

The next annual meeting of the American Pharmaceutical Association will be held in Atlantic City, New Jersey, April 30 to May 6, 1950. Members planning to present papers before any Section during this meeting are earnestly requested and strongly urged to notify the appropriate Section secretary of their intention promptly. Titles and abstracts (not to exceed 250 words) of papers should be submitted by February 1, 1950, or preferably earlier, in order to insure inclusion in the preliminary program. Send titles and abstracts of papers to:

### *SECTION SECRETARIES*

*SCIENTIFIC*

RAY S. KELLEY, Secretary
179 Longwood Avenue
Boston 15, Mass.

*PHARMACEUTICAL ECONOMICS*

JOHN MACCARTNEY, Secretary
Parke, Davis and Company
Detroit, Michigan

*EDUCATION AND LEGISLATION*

DAVID W. O'DAY, Secretary
University of Wyoming
School of Pharmacy
Laramie, Wyoming

*PRACTICAL PHARMACY*

ELMER M. PLEIN, Secretary
University of Washington
College of Pharmacy
Seattle 5, Wash.

*HISTORICAL PHARMACY*

GLENN SONNEDECKER, Secretary
University of Wisconsin
School of Pharmacy
Madison, Wisconsin